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Short Studies of North American COLEOPTERA.

BY JOHN L. LECONTE, M. D.

Under this title I have brought together some tables of genera containing easily recognized but neglected species, which have so accumulated in local collections as to be inconvenient from their number. Several of the tables were prepared two or three years ago and were intended as the bases of more or less extensive monographs, which want of time has prevented me from elaborating. Though the descriptions are apparently expressed in but few words, it will be found that the subordination of characters used, in reality, indicates all the most important specific differences, and I hope, therefore, that the student will find no difficulty in identifying the species found in his neighborhood. I have also availed myself of the opportunity to describe a few remarkable species, which represent, sometimes new genera, sometimes those not before recognized in our fauna.

I must express my special thanks to Mr. G. W. Belfrage for a complete set of the species collected by him in Texas, and to Mr. E. A. Schwarz for a large series from the same State, and kindly submitted to me by permission of Mr. C. V. Riley, U. S. Entom. Commission; also to Mr. A. Bolter for many species from California and Florida.

Full lists of the Texas species, will I hope soon be ready for publication, like those of Michigan and Florida species prepared by Messrs. Hubbard and Schwarz,* which have added so greatly to the knowledge of geographical distribution of Coleoptera in this country.

DROMIUS Bon.

D. atriceps.—Very elongate, shining pale yellow. Head large rhomboidal, black; antennæ not longer than the head and prothorax, yellow, rather stout; palpi yellow, last joint elongated, compressed at the tip, so as to appear pointed when viewed edge-wise; anterior outline of mentum indistinct. Prothorax narrower and shorter than the head, longer than wide, narrowed behind, hind margin rounded, basal angles obtuse not prominent, dorsal line deep, basal impressions distinct. Elytra nearly twice as long as the head and prothorax, very broadly truncate behind and shorter than the abdomen; humeri rounded, not at all prominent; striæ obliterated, scutellar puncture large;

* Proc. Am. Philosophical Society, 1878.

about the middle is a broad ill-defined transverse fuscous band. Beneath entirely yellow, tarsi filiform, claws serrate. Length 4 mm.

Bayou Sara, La.; E. A. Schwarz. A singular insect having the appearance of the European *Demetrius atricapillus*.

AXINOPALPUS Lec.

A. nigriceps.—Elongate, depressed, testaceous, trunk, side margin of elytra and prothorax darker; head blackish piceous, alutaceous and finely punctulate; eyes moderately convex. Prothorax wider than long, narrowed behind, sides sinuate towards the base, hind angles rectangular, reflexed. Elytra faintly striate, with two indistinct dorsal punctures; scutellar region usually dusky. Length 3 mms.

Allied to the Californian *A. fusciceps* but larger, with the head somewhat broader and the eyes more convex. The mouth, palpi, antennæ and legs are entirely testaceous.

There seem to be no differences between *A. biplagiatus* and *californicus*. The specimens from the Pacific States are slightly darker in color, the antennæ and legs being sometimes piceous. A specimen was found at Veta Pass, Colorado, by Mr. Schwarz, so that the range is complete from the eastern to the western side of the continent.

LOXOPEZA Chaud.

L. testacea.

I have given this name to a Texan form collected by Mr. Belfrage, but which differs in no respect, except color, from *L. tricolor*. Following the arrangement adopted by Baron de Chaudoir, it is necessary at present that it should be known by a distinct name; but a renewed study of the genus with larger series of the Mexican species may result in a diminution of the valid ones to be retained.

AMARA Bon.

A. (Percosia) fortis.—Robust oval, convex, shining black. Prothorax one-half wider than long, much rounded on the sides, narrower at apex, but widest in front of the base, which is rugose and slightly punctured with two distinct impressions each side; the outer one is triangular and extends almost to the angle, which is obtuse, and sometimes very slightly rounded. Elytral striæ slightly punctured, interspaces feebly convex. Episterna of the metathorax broader at base than long, strongly and sparsely punctured; sides of metasternum and ventral segments punctured. Antennæ, palpi and legs tinged with reddish. Length 10—11.5 mms.

Texas, Belfrage. Differs from *A. obesa* by the more robust form, by the prothorax more rounded on the sides and wider in front, and finally by the much broader metathoracic episterna and shorter metasternum. It seems to represent the south European *A. sicula*.

BADISTER Clairv.

The species of *Badister* known in our fauna may be tabulated as follows:

- Elytral striae fine, interspaces broad and flat.....2.
- Elytral striae deep, interspaces narrow, convex; antennae and legs rufo-testaceous, elytra rufo-piceous, clouded behind.....1. **notatus**.
- 2.—Elytra spotted.....3.
- Elytra not spotted.....5.
- 3.—Prothorax black, legs and elytra orange, the latter behind the middle mostly black.....4.
- Prothorax legs and elytra bright yellow; the latter with broad medial band interrupted at the suture, and an apical blotch iridescent black; basal impressions of prothorax shallow, but broad.....2. **pulchellus**.
- Prothorax legs and elytra bright yellow; the latter with the black markings confluent longitudinally from the fourth to the eighth stria, basal impressions of prothorax shallow and small; (differs from the European specimens only by the prothorax very slightly more flattened near the hind angles, and by the spots being more broadly confluent).
3. **bipustulatus**.
- 4.—Side margin of prothorax a little wider and more reflexed near the base; broad elytral medial band and apical spot confluent longitudinally from the fourth to the sixth stria.....4. **maculatus**.
- Side margin of prothorax not wider near the base; elytral spots confluent from the fourth to the ninth stria, forming the pattern described below.....5. **elegans** n. sp.
- 5.—Black, or nearly so, legs yellow.....6.
- Prothorax and legs testaceous, elytra piceous, suture, side margin, epipleurae and base testaceous; hind angles of prothorax broadly rounded, side margin fine, scarcely broader near the base.....6. **obtusus**.
- Piceous; head as wide as prothorax; hind angles of prothorax obtuse, slightly rounded, base obliquely truncate each side, side margin slightly wider and more reflexed near the base.....7. **ferrugineus**.
- Entirely black; head narrower than prothorax, which is formed as in *ferrugineus* but less narrowed behind.....8. **anthracinus**.
- 6.—Hind angles of prothorax very much rounded.....9. **flavipes**.
- Hind angles of prothorax obtuse, feebly rounded; side margin narrow, not more reflexed towards the base; margins piceous.....10. **micans**.
- Hind angles of prothorax obtuse, not rounded; side margin wider and more reflexed near the base; margins piceous.....11. **reflexus** n. sp.

3. **B. bipustulatus** *Fabr.*

I have two specimens from Vancouver Island, which agree perfectly with a European specimen, except in having the prothorax a little flatter at base near the angles, and the black elytral spots larger and confluent for the greater part of the width.

5. **B. elegans.**—Shining black, base of antennæ, palpi and legs reddish-yellow; prothorax a little wider than long, flat, sides broadly rounded, margin narrow, piceous and not wider at the base, which is rounded; hind angles obtuse, much rounded, basal impressions very shallow. Elytra one-third wider than

the prothorax, elongate-oval, emarginate at base, striæ fine, interspaces flat, dorsal punctures two, adjacent to the second stria; the base nearly to the middle, epipleuræ, side margin, suture, and a common circular spot near the tip are orange color, the rest of the surface iridescent black. Length 5.5 mms.

Three specimens, Bosque Co., Belfrage. Closely resembles *B. maculatus*, and differs only by the side margin of the prothorax not being wider towards the hind angles, and by the antennæ being piceous, with only the first and second joints yellow.

11. *B. reflexus*.—Piceous shining, legs pale; margin of prothorax and elytra piceo-testaceous, the latter with a slight metallic reflection, striæ fine, interspaces broad, nearly flat, third with two distinct dorsal punctures adjacent to the second stria; prothorax wider than long, trapezoidal, narrowed behind, sides more strongly margined than usual, margin wider and more reflexed near the base, which is oblique each side; hind angles very obtuse and rounded; basal impressions rather deep; antennæ piceous, tip of eleventh joint paler. Length 4 mm.

New York, Michigan, Louisiana. Confused in my collection with *B. micans*, from which it differs by smaller size and more strongly margined prothorax.

According to a typical specimen *B. submarinus* Motsch., differs from *ferrugineus* only by the size being smaller, (4.5 mm.), and the hind angles of the prothorax more distinctly marked. It seems to me only a slight variety.

HALIPLUS Latr.

H. tumidus.—Broadly and acutely ovate, dull yellowish red, shining; prothorax punctured, more sparsely on the disc, more coarsely near the base. Elytra rapidly widened from the base for one-fifth the length, then obliquely rounded and narrowed to the tip; (widest part fully one-half wider than the base of the prothorax); striæ composed of rather coarse punctures becoming smaller behind, interspaces each with a row of small distant punctures; spots narrow, piceous, ill-defined, presenting the appearance of a sutural stripe, with two oblique interrupted branches and a marginal blotch near the tip. Prosternum coarsely punctured, perpendicularly declivous in front, deeply and broadly sulcate, strongly margined at the sides, slightly convex along the middle for the hinder half of its length; metasternum with a deep square impression, the sides of which are elevated, sparsely and coarsely punctured, coxal plates less coarsely punctured. Length 3 mm.

One specimen, Bosque Co., Texas; Belfrage. Easily known by the more ventricose form and peculiar sternal impressions; the prothoracic side pieces are sparsely punctured.

XENISTUSA n. g. (Tachyporini).

Antennæ inserted at the sides of the head in front of the eyes and a little inside of them; front not margined above the antennæ; the latter eleven-jointed, first joint nearly as long as the three following; outer joints gradually broader and transverse, last rounded at tip;

eyes small, oval. Maxillary palpi four-jointed, last joint small, acicular. Head rounded, broadly concave in front. Prothorax wider than the head, deeply bilobed, lobes converging behind and covering the scutellum, rounded in front, triangular space between them membranous. Elytra a little longer than the prothorax, convex, sparsely pilose with long erect hairs, epipleuræ not distinct. Abdomen coriaceous, cylindrical, not margined, sparsely pilose with long erect hairs. Legs moderate, tarsi five-jointed, tibiæ somewhat compressed, spinose to a greater or less extent, first joint of middle and hind tarsi as long as the tibiæ, and longer than the remaining four united; claws slender.

This genus is nearly allied to *Trichopsenius* Horn, and has the same peculiar connate metacoxal plates; it differs chiefly by the prothorax not wider towards the base with an apical membranous space, and by the elytra with a depressed suture and lateral groove. Examination of well preserved specimens of *Trichopsenius* shows that all the tarsi are five-jointed, and the first joint of the middle and hind pair longer than the others united, elongate-cylindrical.

X. cavernosa.—Brown, shining, sparsely pilose with erect long hairs; base of antennæ, palpi, legs and abdomen testaceous; front slightly and broadly concave; prothorax most profoundly bilobed, about twice as wide as long, prolonged behind at the middle; elytra twice as long as the prothorax, deeply impressed along the suture, and with a deep but short groove near the sides. Abdomen twice as long as the elytra, convex, inflated, sparsely punctulate. Length 1.6 mm.

Columbus, Texas; E. A. Schwarz; one specimen with *Termes*; other specimens were seen, but escaped. From the form and size of the abdomen this is evidently a ♀.

X. fossata.—Broader subdepressed, (resembling in general appearance an *Anthobium*), dark brown shining, sparsely pilose with long erect hairs; base of antennæ, palpi and legs testaceous. Head broadly and deeply concave in front. Prothorax three times as wide as long, with a large very deep triangular excavation extending from the front margin to the base, which is broadly rounded. Elytra more than twice longer than the prothorax, very deeply sulcate along the suture, and with a lateral groove as in the preceding; exposed part of abdomen hardly equal in length to the elytra, sparsely punctulate. Length 1 mm.

One specimen with the preceding, of which it is perhaps the ♂, although from the difference in the form of the prothorax I think it unlikely.

X. pressa.—Of the same form as *X. fossata*, but smaller, dark brown, shining, sparsely pilose with long erect hair, palpi and legs somewhat testaceous. Head but slightly concave in front. Prothorax transverse oval, fully three times wider than long, broadly but feebly impressed in front, membrane

quite visible along the anterior margin between the prothorax and the head. Elytra with an elongate scutellar excavation, continued along the suture for one-fourth the length, then flattened; sutural region behind the excavation flat, disc of the elytra deeply and widely excavated, outer margin of excavation rectilinear, inner margin curved in the arc of a circle. Exposed portion of abdomen not longer than the elytra, sparsely punctulate; hind tibiae broader and more compressed than in the two preceding forms. First joint of hind tarsi compressed, more than twice as wide as the following ones, outer surface concave. Length 1 mm.

One specimen with the two preceding. The differences between this and the preceding prevent me from viewing *X. cavernosa* and *fossata* as sexual forms of the same species; but it is quite possible that this genus, living with *Termes*, may have assumed to some degree the polymorphous characters exemplified in that remarkable type. However that may be, I must be content for the present to describe these three individuals, two ♂ and one ♀, under separate specific names, and to indicate the possibility that with increased knowledge they may be grouped under one.

LEPTACINUS Er.

Palpi with last joint acicular; middle coxæ separated by meso- and metasternum; front tarsi not dilated.

A.—Maxillary palpi with fourth joint slender, scarcely shorter than the third; lateral margin of prothorax acute, not united with the lower line; head beneath normal.....1. **flavipes.**

B.—Similar to **A.**, but fourth joint of maxillary palpi much shorter than the third, conical, acute.....2. **grandiceps.**

C.—Maxillary palpi with last joint very small, acicular; lateral edge of prothorax acute.....3. **brunnescens** n. sp.

D.—Maxillary palpi with last joint very small, acicular; lateral edge of prothorax not acute in front of the middle.

Prothorax with distinct angles.....2.

Prothorax elongate-oval.....4. **longicollis.**

2.—Head coarsely punctured beneath.....3.

Head feebly punctured.....5. **parvus.**

3.—Sides of prothorax with confused punctures.....4.

Prothorax with dorsal series of punctures.....5.

4.—Elytra entirely piceous black.....6. **nigripennis.**

Ferruginous, elytra piceous with broad apical yellow margin; abdomen usually piceous.....7. **ruficollis.**

5.—Piceous black, prothorax with dorsal series of 8—10 punctures; legs pale.

8. **nigritulus** n. sp.

Testaceous, smaller, dorsal series of six punctures....9. **pallidulus** n. sp.

Piceous, prothorax with dorsal series of 12—14 punctures; elytra testaceous, dusky towards the base; legs dark, front tarsi somewhat dilated.

10. **seriatus** n. sp.

E.—Maxillary palpi with fourth joint slender, not shorter than the third; head beneath flattened, with marginal lines at the side...11. **cephalicus** n. sp.

Two European species *L. parumpunctatus* Gyll., and *batychrus* Gyll., are mentioned by Fauvel as occurring in North America, but I have seen no specimens of them.

3. ***L. brunnescens***.—Very elongate; head piceous, longer than wide, sides parallel, hind angles strongly rounded, upper surface sparsely but strongly punctured, with a smooth medial space; under surface coarsely sparsely punctured. Antennæ but little longer than the head, gradually but strongly thickened externally. Prothorax castaneous, one-half longer than wide, sides straight, slightly converging behind, base broadly rounded, apical margin oblique each side, front angles obtuse, much rounded; disc with a broad smooth dorsal stripe, limited each side by a series of well-marked punctures, sides sparsely covered with similar punctures. Elytra paler red-brown sparsely and distinctly punctured. Abdomen piceous, dorsal and ventral segments sparsely punctulate and pubescent. Legs ferruginous. Length 6—7 mm.

Gilroy, California; three specimens.

Other specimens from San Mateo and Mojave Desert differ by the punctures of the prothorax rather smaller, and the head slightly wider behind. In two of them the prothorax is of a bright brownish ferruginous, of the same color as the elytra.

8. ***L. nigritulus***.—Piceous black, shining, sparsely pilose; antennæ and feet ferruginous. Head convex, elongate-ovate, wider behind, sparsely and very coarsely punctured each side, frontal grooves long and deep; under surface sparsely and coarsely punctured. Antennæ a little longer than the head. Prothorax more than one-third longer than wide, narrower behind, rounded at base and apex, angles much rounded, disc moderately convex, with dorsal series of 8—10 punctures, sides with not more than 8—12 distant punctures. Elytra as long as the prothorax, sparsely punctured with the punctures arranged somewhat in rows. Abdomen sparsely punctulate. Length 3.4 mm; .13 inch.

Michigan, Messrs. Hubbard and Schwarz; also in Canada.

9. ***L. pallidulus***.—Testaceous shining, head and abdomen darker. Head convex, elongate, slightly wider behind, coarsely and sparsely punctured each side, frontal grooves long and deep. Antennæ not longer than the head. Prothorax one-third longer than wide, slightly narrowed behind, base and apex rounded, dorsal rows composed of six punctures; with a curved lateral row as in many *Xantholinus*. Elytra distantly punctured in rows. Abdomen feebly and sparsely punctulate. Length 2.2 mm.

One specimen, Fort Yuma, California. Except that the last joint of the maxillary palpi is small, slender, aciculate, and much shorter than the turbinate third joint, this and the preceding species would be placed in *Xantholinus*, with which they agree in the sculpture of the head and prothorax.

10. ***L. seriatus***.—Slender shining black, sparsely hairy, antennæ and legs red-brown, elytra pale yellow, blackish in front of the middle. Head more than one-half longer than wide, narrower in front, convex, base truncate, hind angles broadly rounded, above and below sparsely coarsely punctured, frontal grooves deep and long; there is an undefined medial smooth space extending

nearly to the occiput; on the under surface the punctures at the sides are arranged in an irregular double row. Antennæ but little longer than the head, only slightly thickened externally. Prothorax as long as the head, not narrower in front; dorsal series of 12—14 punctures, lateral series curved as in *Xantholinus*. Elytra pale yellow, blackish towards the base, punctures distinct, not fine nor dense, arranged somewhat in series; sutural stria very fine. Abdomen sparsely punctulate. Length 4.8 mm.

Detroit, Michigan; one specimen, Hubbard and Schwarz; also found in Canada. Seems related to the European *L. parumpunctatus* Gyll., which is cited by Fauvel, Faune Gallo-Rhenane, iii, 375, as found in North America, but the dorsal series of the prothorax is composed of a large number of punctures.

11. **L. cephalicus**.—Less slender, piceous black, shining. Head about one-half longer than wide, narrower in front, hind angles and base strongly rounded; above convex, smooth, with a few very large punctures each side; frontal grooves long and deep; beneath with a few large punctures and also with distinct marginal lines at the sides, and a finer medial one bifurcating in front. Prothorax oblong with strongly rounded angles, thus becoming almost oval, nearly one-half longer than wide; smooth with dorsal series of five large punctures and a group of seven lateral punctures. Elytra piceous, darker at base, with strong sutural stria, and three ill-defined series of punctures. Abdomen sparsely finely punctured. Legs and antennæ rufo-testaceous, the latter scarcely subgeniculate, outer joints somewhat rounded, feebly transverse. Length 4.8 mm.

Columbia, South Carolina; Dr. Zimmermann; one specimen.

I have placed this singular insect in the present genus because the middle coxæ are separated and the front tarsi slender. The last joint of the maxillary palpi is slender and acicular, though not shorter than the third, as is the case in *L. flavipes*.

METAPONCUS Kraatz.

Maxillary palpi with the last joint very small, acicular; middle coxæ contiguous; front tarsi not dilated.

In addition to these characters this genus is readily known by the antennæ being but little longer than the head, strongly geniculate, gradually but strongly thickened externally, with the outer joints about three times as wide as long.

M. floridanus.—Subcylindrical, brown, shining, slightly hairy. Head twice as wide as long, convex, narrower in front, base truncate, hind angles strongly rounded, upper surface distinctly but not densely punctured, with a broad smooth frontal stripe, under surface sparsely coarsely punctured; antennæ paler, a little longer than the head, outer joints gradually much wider. Prothorax as long as the head but not narrower, distinctly not densely punctured, with a broad smooth dorsal stripe. Elytra sparsely punctured, sutural stria obsolete. Abdomen finely not densely punctulate, tip and legs paler. Length 2.4 mm.

Enterprize, Florida; Messrs. Hubbard and Schwarz; one specimen; May 26th.

LEPTOLINUS Kraatz.

Maxillary palpi with third joint tumid, obconical, last joint very small, acicular; front tarsi broadly dilated.

Dull brownish black; head densely aciculate, prothorax densely punctured with smooth narrow dorsal space; antennæ, legs and elytra red, the latter dusky near the scutellum.....1. **rubripennis** n. sp.

Very small, testaceous, shining, head and prothorax very sparsely punctured towards the sides; elytra sparsely punctured.....2. **pusio** n. sp.

1. **L. rubripennis**.—Brownish black, nearly opaque, thinly clothed with short brown pubescence. Head twice as long as wide, sides parallel, hind angles and base rounded, above and beneath slightly convex, densely not coarsely aciculate, without smooth frontal line, or other sculpture; antennæ rufous, extending half the length of the prothorax, gradually but not strongly thickened externally, outer joints nearly twice as wide as long. Prothorax not longer, but a little narrower than the head, rather densely punctured, with a narrow smooth dorsal stripe. Elytra densely more finely punctured, dull red, blackish about the scutel, sutural stria well marked. Abdomen above and beneath very finely and densely punctulate, tip yellowish red; hind margins of ventral segments and legs of the same color. Length 6.2 mm.

♂.—Last ventral acutely incised and longitudinally impressed.

Middle and Western States. Mr. Fauvel has named it for his correspondents *L. rubripennis*.

2. **L. pusio**.—Very small, slender, pale yellow, shining. Head rather convex, nearly twice as long as its width, smooth with a few small scattered punctures each side; sides nearly parallel, base truncate, hind angles narrowly rounded; under surface very sparsely punctured. Prothorax not longer nor narrower than the head, with a few scattered punctures each side. Elytra sparsely finely punctured, sutural stria very fine. Abdomen sparsely punctured and pubescent. Length less than 2 mm.

Columbia, S. C.; Dr. Zimmermann; one specimen. The palpi, antennæ and front tarsi are just as in the preceding species; but I am uncertain if the middle coxæ are separate or contiguous. The small size and great age of the specimen prevent me from endeavoring to remount it. It is the smallest species of the tribe known to me.

XANTHOLINUS.

A.—Upper marginal line of prothorax deflexed, and confluent with the lower one in front.

Prothorax with dorsal series of a few fine punctures.....1. **cephalus**.

Prothorax without dorsal punctures.....2. **fulgidus**.

B.—Upper marginal line of prothorax separate from the lower one, and not deflexed in front.

Dorsal series of 4—6 punctures; color dark.....2.

Dorsal series of 5—6 punctures color pale.....3.

Dorsal series of 10—12 punctures.....4.

- 2.—Black; elytra rather coarsely punctured; head with a coarsely punctured lateral groove.....3. **obsidianus**.
 Black; antennæ legs and elytra pale; elytra coarsely punctured; head with finely punctured lateral groove.....4. **temporalis** n. sp.
 Black; elytra piceous, more finely punctured; head with coarsely punctured and feebler lateral groove.....5. **picipennis** n. sp.
 Black; antennæ legs and elytra ferruginous, the last piceous at base; head without lateral groove.....6. **dimidiatus** n. sp.
- 3.—Larger and stouter, head piceous.....7. **emmesus**.
 a. Smaller and more slender; head piceous, elytra and abdomen darker than prothorax; *fusciceps* Fauvel.
- 4.—Piceous-black, prothorax not paler.....5.
 Brown-testaceous, head darker.....7.
- 5.—Head beneath coarsely and deeply punctured.....6.
 Head beneath feebly punctured; above very sparsely and coarsely punctured at the sides.....8. **gularis** n. sp.
- 6.—Elytra piceous, legs testaceous.....9. **obscurus**.
 Elytra bright red, legs rufo-testaceous.....10. **sanguinipennis** n. sp.
 Smaller; elytra yellow, legs pale-testaceous.....11. **pusillus**.
- 7.—Gular sutures deep, as in all the preceding species.....12. **hamatus**.
 Gular sutures very fine.....13. **nanus** n. sp.

The European *X. punctulatus* Payk., is said by Fauvel, Faun. Gallo-Rhenane, iii, 386, to occur in North America, but I have seen no specimen of it.

1. **X. cephalus** Say, is found also in California.

2. **X. fulgidus** Fabr., has been introduced from Europe.

4. **X. temporalis**.—More slender than *X. obsidianus*, piceous, antennæ, legs, sides and tip of elytra piceo-testaceous; elytra sparsely coarsely punctured, punctures arranged in nearly regular rows. Head moderately convex, smooth, sparsely and coarsely punctured at the sides, inner frontal grooves long and deep; under surface very sparsely punctured; sides with a broad shallow longitudinal groove, distinctly margined and marked with a few shallow punctures. Prothorax with dorsal series 4—5 punctured, lateral series punctured, with a large puncture nearer the margin as usual. Dorsal segments sparsely punctulate in front, nearly smooth behind. Length 4.7 mm.

Cedar Keys, Florida, Mr. Hubbard. Differs from *X. obsidianus* by smaller size, more slender form, by the lateral grooves of the head less punctured, and by the large punctures of the upper surface of the head being fewer, and not mixed with small punctures.

5. **X. picipennis**.—Of the same form and size as *X. obsidianus*, piceous, black; antennæ dark brown, legs ferruginous; elytra piceous, paler at the margins, more finely not densely punctured. Head moderately convex, scarcely one-half longer than wide, hind angles much rounded, above very coarsely punctured, with a large median space smooth; the inner pair of frontal grooves deep and long, the outer ones not visible; under surface very sparsely coarsely punctured, with a lateral band of confused punctures, and distinct marginal edge. Prothorax as long as the head, oblong, with rounded angles, dorsal

series of 4 punctures, lateral series curved as usual, of 8—9 punctures; basal edge sometimes rufo-piceous. Dorsal segments nearly smooth, hind margins piceous; ventral segments dark piceous, tip rufo-piceous. Length 5.2—6.2 mm.

Abundant in various parts of California. The head of the ♂ is a little larger and more nearly parallel on the sides than that of the ♀.

6. *X. dimidiatus*.—More slender than *X. picipennis*, piceous black, antennæ and legs dark ferruginous; elytra ferruginous, rather indistinctly finely punctured, blackish for the anterior half. Head moderately convex, about one-half longer than wide, hind angles rounded; upper surface smooth at middle, sparsely and coarsely punctured at the sides; inner frontal grooves long and deep, the outer pair represented by a group of punctures near the eyes; under surface very sparsely and coarsely punctured, lateral edge obtuse much less defined than in *X. picipennis*. Prothorax oblong with rounded angles, one-half longer than wide, slightly narrowed behind; dorsal series 3—4 punctured, lateral series 7—9 punctured, curved as usual. Elytra with a dorsal series of fine but regular punctures. Dorsal segments smooth, piceous, hind margins paler; ventral segments more broadly margined with pale piceous; tip pale. Length 5.6 mm.

San Bernardino, and Mojave Desert, California. I have seen but two specimens, collected by Mr. Crotch.

7. a. *X. fusciceps*.

Mr. Fauvel has given this name to a small race of *X. emmesus* (4.5 mm.), which does not seem to differ otherwise. It has an equally wide distribution, being found in the Middle, Western and Southern States.

8. *X. gularis*.—Slender, black, antennæ legs and elytra dark red, the last distinctly and sparsely but not deeply punctured, almost in rows. Head convex, elongate, suboval, rounded behind, very sparsely punctured at the sides, inner frontal grooves long and deep, outer or ocular ones short; under surface with a few scattered coarse punctures, nearly smooth behind. Prothorax elongate-oblong with much rounded angles, dorsal series of 9—10 strongly marked punctures, lateral series curved, well defined, of 9—10 punctures; between the two and near the front margin is a group of four punctures; likewise some near the front angles. Abdomen dark piceous, dorsal segments finely distinctly punctured; ventral segments more strongly punctured, tip rufo-piceous. Length 7.5 mm.

Detroit, Michigan, one specimen, Messrs. Hubbard and Schwarz. Differs from *X. obscurus* chiefly by the less punctured head, without any trace of a smooth lateral line, which in that species represents the temporal margin of *obsidianus*, etc.

9. *X. obscurus* Er.

Varies greatly in size, and has a very wide distribution from Lake Superior and Canada to California.

10. **X. sanguinipennis.**—Slender, shining black, antennæ legs, and elytra ferruginous, the last strongly but sparsely punctured. Head oblong, one-half wider than long, hind angles rounded, upper surface with large scattered punctures, and an undefined frontal smooth space; frontal and ocular grooves very short, under surface punctured like the upper one, without trace of lateral groove or margin. Prothorax one-half longer than wide, angles rounded, sides parallel; dorsal series 10—12 punctured, with some confused punctures near the base and tip; lateral series irregular in one specimen, regular in two, about 8—10 punctured, with scattered punctures near the front angles. Dorsal segments piceous, finely not densely punctured; ventral segments rufo-piceous, similarly punctured. Length 6 mm.

Pennsylvania; I have examined three specimens.

13. **X. nanus.**—Closely resembles *X. hamatus*, but differs by the shorter frontal grooves, by the gular sutures being effaced, and the under surface of the head being smooth between the punctures instead of finely strigose. There are also some large punctures, between the dorsal and lateral series of the prothorax, which cause the lateral series to appear irregular. The elytra are more strongly punctured, and the punctures are not arranged in series. Length 4 mm.

San Diego, Cal.; one specimen. In the characters above given this species resembles *Leptacinus pallidulus*, but the last joint of the maxillary palpi is distinctly conical and not acicular.

LATHROBIUM Grav.

Prothorax uniformly punctured with distinct smooth dorsal line; elytra densely punctured, front tibiæ dilated and obliquely grooved on inner side; sixth ventral prolonged behind in ♀; ♂ sixth ventral truncate, seventh broadly divided; front thighs thickened and armed with a tooth, or sinuate on the lower margin.....2.

Prothorax (except in *politum*), with dorsal series of close set punctures, sides sparsely punctured; elytra punctured more or less regularly in rows; head usually very sparsely punctured, sides parallel behind the eyes, base and hind angles rounded, sometimes nearly truncate; front angles of prothorax more distinct than in the species of the other groups, sometimes scarcely rounded; hind tarsi with second joint not longer, or scarcely longer than the first. Front tibiæ not dilated, and but feebly grooved on the inner side; front thighs thickened, not sinuate nor toothed on lower margin.....11.

Prothorax with very narrow dorsal line, punctures uniform; elytra densely punctured; epipleuræ without marginal stria;* second joint of hind tarsi not much longer than the first; front tibiæ obliquely sulcate near the base to fit the obtuse tooth of the front thighs; ♂ sixth ventral slightly prolonged at the middle; seventh widely divided into two broad triangular valves; 10 mm.: Northern States.....1. **grande.**

* In all the other species the epipleuræ have a distinct stria near the extreme margin, in addition to the line which separates them from the dorsal part of the elytra.

- 2.—Head semicircularly rounded behind the eyes, very sparsely punctured...3.
 Head longer, more oval, less semicircularly rounded behind, more thickly punctured; color black, antennæ brown, legs ferruginous.4.
 Head truncate behind, with rounded angles.....6.
- 3.—♂ sixth ventral deeply and acutely incised; 6—7 mm.; Northern and Western States, Kansas.....2. **punctulatum**.
 ♂ sixth ventral much less deeply incised; 6 mm.; Southern States.
 3. **angulare**.
 ♂ sixth ventral deeply incised; smaller, entirely black; 5.3 mm.; Mass.; Lake Superior.....4. **nigrum**.
 ♂ sixth ventral deeply incised, fifth strongly impressed; still smaller, black, antennæ, legs and elytra ferruginous, the last more strongly punctured; 4.5 mm.; Detroit, Mich.; (one specimen).....5. **bicolor** n. sp.
 ♂ sixth ventral with a small acute incision, fifth with a rounded apical impression; head rather longer, color black, shining, antennæ brown, first joint testaceous, legs yellow, elytra less densely punctured; 4.5 mm.; Michigan; Florida.....6. **nitidulum** n. sp.
- 4.—Head and elytra more coarsely punctured.....5.
 Head and elytra finely punctured; black; legs black, rarely ferruginous; 5.8 mm.; Vancouver; B. Columbia.....7. **fluitum** n. sp.
- 5.—Head more densely punctured; ♂ sixth ventral acutely carinate behind, and triangularly emarginate; black, antennæ and legs brown; 8 mm.; California, (San Mateo, Gilroy).....8. **puncticeps** n. sp.
 Head less densely punctured, especially in front; ♂ sixth ventral broadly and feebly emarginate; black, antennæ, legs and elytra brown, not punctured in rows; 6.5—8 mm.; California, (S. Mateo, S. Diego).
 9. **jacobinum**.
 Head less densely punctured; elytra punctured almost in rows; ♂ sixth ventral broadly and feebly emarginate, fifth with a small impression; black, antennæ and legs brown; 6.5 mm.; Vancouver; California.
 10. **subseriatum** n. sp.
- 6.—Cylindrical convex, head sparsely punctured.....7.
 Less convex, almost depressed.....10.
- 7.—Elytra as long as the prothorax.....8.
 Elytra much shorter than the prothorax, coarsely and distantly punctured, color uniform brown; ♂? 7.8 mm.; Illinois.....11. **brevipenne**.
- 8.—♂ sixth ventral emarginate.....9.
 ♂ sixth ventral subcarinate at tip, not emarginate; black, antennæ and legs brown, the former stouter than usual, with rounded joints; 8.2 mm.; Western States.....12. **armatum**.
- 9.—♂ sixth ventral squarely emarginate, with a medial smooth space limited by short longitudinal impressions; fifth ventral feebly impressed; black, antennæ stout with rounded joints, legs piceous or ferruginous; 5.4 mm.; Oregon; Mass.....13. **othioides** n. sp.
 ♂ sixth ventral broadly and deeply emarginate, and deeply longitudinally impressed; fifth longitudinally but feebly impressed; black, antennæ and legs brown; 7.5 mm.; Mass.; N. Y.....14. **simile**.
 ♂ sixth ventral broadly semicircularly emarginate, and longitudinally impressed; fifth broadly impressed; black, antennæ and legs brown; 5.5—6.5 mm.; Lake Superior; Illinois.....15. **concolor**.

- ♂ sixth ventral feebly emarginate, with a faint very narrow longitudinal impression; black, antennæ and legs blackish-piceous; 6.5—7 mm.; Lake Superior; Mass.....16. **simplex** n. sp.
- ♂ sixth ventral semicircularly emarginate, then semicircularly impressed, broadly flattened at the middle; fifth with a longitudinal impression, which is rounded in front, and extends from the hind margin for one-half the length; black, antennæ and legs brown, the former stout, with rounded joints; 4.6 mm.; N. Y.; Can.; Mich.; Col.17. **tenue**.
- 10.—Piceous, antennæ slender, legs and hinder half of elytra ferruginous; the last as strongly punctured as the prothorax; ♂? 5.5 mm.; Vancouver, (one specimen).....18. **divisum** n. sp.
- Piceous, antennæ brown, legs yellow, elytra more finely and sparsely punctured; ♂ fifth and sixth ventrals broadly emarginate, the former more feebly; 8 mm.; Louisiana, (one specimen).....19. **pedale**.
- Very small, testaceous yellow, elytra rather strongly punctured; ♂ with ventrals 2—6 feebly channeled, sixth with two coarsely granulated black spots; hind tarsi but one-half as long as the tibiæ, joints 1—4 equal; 2.5 mm.; Detroit, Mich.....20. **debile** n. sp.
- 11.—Sides of head and prothorax very sparsely punctured.....12.
- Sides of head and prothorax more densely punctured; elytra finely punctured in rows; which are confused at the sides and tip; color uniform chestnut brown; ♂ sixth ventral acutely and deeply triangularly emarginate; 6 mm.; Middle States.....21. **politum**.
- Head very sparsely, but sides of prothorax less sparsely punctured, elytra strongly but not coarsely punctured, punctures confused, not placed in rows; ventral segments uniformly finely and densely punctured; color dark brown, antennæ and legs ferruginous; ♂ sixth ventral with a small triangular emargination, fifth obsoletely impressed longitudinally; 4.8 mm.; Mass.....22. **confusum** n. sp.
- 12.—Elytra with rows of coarse punctures slightly confused at sides and tip; form cylindrical convex.....13.
- Elytra with rows of fine punctures, confused at sides and tip.....14.
- Elytra with imperfect and distant rows of punctures; hind tarsi longer than usual, but little shorter than the tibiæ.....17.
- 13.—Black, antennæ and legs red-brown; ♂ sixth ventral broadly emarginate; fifth slightly impressed at tip; (fourth transversely impressed, perhaps accidentally); black, antennæ brown, legs dull yellow; 5.8 mm.; North Carolina, (one specimen).....23. **seriatum**.
- Brown, antennæ, legs and elytra paler; ♂ sixth ventral triangularly impressed behind, and less emarginate than in *seriatum*; 6—7 mm.; Middle and Western States.....24. **longiusculum**.
- 14.—Fifth and sixth ventrals less densely punctured.....15.
- Fifth ventral finely and densely punctured like the fourth.....16.
- All the ventrals sparsely punctured; color black, antennæ and legs red-brown; 6 mm.; Florida, (one specimen).....25. **parcum** n. sp.
- 15.—Black, rather finely punctured, antennæ and legs brown; ♂ sixth ventral slightly impressed longitudinally, deeply and narrowly emarginate behind, end of emargination rounded; 5.8 mm.; San Jose, Cal.
26. **californicum**.

- Ferruginous, head and elytra usually dark piceous; antennæ scarcely thicker externally; ♂ sixth ventral acutely incised behind; 4.5—5.6 mm.: Middle States to Vancouver.....27. **collare**.
 Smaller and more slender, brown or ferruginous, antennæ stouter, thickened externally; ♂ fifth ventral slightly impressed and subemarginate behind; 3.5—4.8 mm.: Middle, Southern and Western States; Kansas.
 28. **ambiguum** n. sp.
 16.—Brown or ferruginous, head and elytra darker; ♂ sixth ventral feebly impressed, broadly triangularly emarginate behind; 4 mm.; Pa.; Fla.; Ks.....29. **ventrale** n. sp.
 Ferruginous, abdomen piceous, last two segments ferruginous; elytra less punctured; ♂ sixth ventral slightly triangularly incised; 3.7 mm.; Pa.; S. C.; La.....30. **anale** n. sp.
 17.—Testaceous yellow, sides of prothorax with coarse scattered punctures; ♂ sixth ventral with a small broad triangular emargination at tip; 3.8 mm.; Pa.; Fla.; Mich.; Col.....31. **pallidulum** n. sp.
 Testaceous yellow, dorsal surface of abdomen more or less dusky; head sometimes brown; sides of prothorax with a curved line of punctures; 3.7 mm.; Arizona; Texas; two ♀.....32. **lituarium** n. sp.
 Ferruginous, head, and frequently the basal half of elytra black, dorsal segments dusky; ♂ sixth ventral triangularly impressed, broadly emarginate behind; fifth slightly notched; 3.7 mm.; Pa.; La.; Fla.; Ks.
 33. **dimidiatum**.

LIPAROCEPHALUS Mäklin.

Mr. Ulke has kindly given me a specimen from Unalaska, which agrees so perfectly with the description of *L. brevipennis* Mäklin, Bull. Mosc. 1853, 192, as to warrant my indicating a second species from California. They may be separated as follows:

Black above, dark brown beneath; head not wider than prothorax, which is but feebly narrowed behind, and not sinuate on the sides; basal angles obtuse, rounded; 2.7 mm.....1. **brevipennis**.

Brown, head wider than the prothorax, which is strongly narrowed behind, with the sides subsinuate near the base; basal angles rectangular, very slightly rounded; 3.6 mm.....2. **cordicollis** n. sp.

Of the second species I have one specimen collected at Mendocino, California, by Mr. A. Agassiz. Both specimens are males; the sixth ventral segment is bisinuate at the middle of the hind margin and fringed with hair in both; but much more strongly in the second; the seventh segment is larger in the first, and flattened along the middle in both, with the depression limited by fine elevated margins, which curve concavely towards the middle.

This is one of the most larva-like Staphylinide genera I have seen; the coxæ are large, conical, and scarcely separated either longitudinally or transversely; the elytra are barely half as long as the prothorax, not imbricated, but with the sutural angle much curved.

These species are found on the sea-shore under seaweed, cast up by the waves.

STILICUS Latr.

- Upper surface of head and prothorax densely punctulate.....2.
 Upper surface of head and prothorax coarsely punctured.....3.
 2.—Head semicircularly rounded behind, nearly smooth beneath; prosternum finely but strongly carinate; 5.3—7 mm.; Penna.; Ariz.....1. **tristis**.
 Head quadrate behind the eyes, hind angles rounded, base emarginate, beneath densely rugosely punctured; prosternum very feebly carinate; blackish piceous, pruinose with very fine pubescence; 4.7 mm.; Cal.; Mo.; Mass.....2. **quadriceps** n. sp.
 Head quadrate behind the eyes, base subtruncate, beneath densely rugosely punctured; prosternum feebly carinate; blackish piceous, finely pubescent, legs sometimes ferruginous; ♂ fifth ventral with an apical tooth; 4 mm.; D. C.; Tenn.; Cala.....3. **opaculus** n. sp.
 3.—Head and prothorax rugosely punctured above.....4.
 Head not rugosely punctured above, sparsely very coarsely punctured beneath, hind angles and base broadly rounded; prothorax with a broad smooth dorsal stripe; bronze-brown, apical margin of elytra and legs yellow; ♂ fifth ventral simple at hind margin; 4 mm.; Pa.; Ill.; La.; Fla.....4. **angularis**.
 4.—Head beneath shining and very sparsely coarsely punctured; bronze-brown, apical margin of elytra yellow, legs darker yellow; head and prothorax less shining; ♂ fifth ventral with an apical tooth; 4 mm.; Mass.; N. Y.; Mich.....5. **dentatus**.
 Head beneath shining and very sparsely punctured; elytra behind scarcely margined with yellow; legs dark yellow; head and prothorax not shining; ♂ fifth ventral with two small tubercles on hind margin; 4 mm.; Mass.; Mr. F. Blanchard.....6. **biarmatus** n. sp.
 Head behind the eyes longer than wide, sides obliquely rounded; beneath densely rugosely punctured; head and prothorax not shining, apical margin of elytra and legs ferruginous-yellow; ♂ fifth ventral with an obsolete apical tooth; 4.4 mm.; Mass.; D. C.; Ill.....7. **rudis**.

The sixth ventral is emarginate in the ♂ of all these species.

The species under No. 2, that is, those with finely punctured head and prothorax extend from the Atlantic to the Pacific regions; those with coarse sculpture are found in the Atlantic region only. I therefore infer that in the preglacial epoch, the former occupied the circumpolar continent, or the western part of North America, while the latter inhabited the south-eastern or subtropical regions.

SCOPÆUS Er.

Besides the three species mentioned in the Crotch Check List, (two of which had been erroneously described by me as *Echiaster*), I have several others, from both sides of the continent, which are easily distinguished, but present no remarkable characters.

The following species, on account of the singular conformation of

the hind legs of the ♂ is very peculiar in this family, and well worthy of description.

S. dentiger.—Slender, black, thinly clothed with extremely fine gray pubescence. Head convex, longer than wide, narrowed in front of the eyes, truncate at base, with the hind angles strongly rounded, surface almost imperceptibly punctulate, front feebly impressed, with two ill-marked punctures behind the impression, beneath finely punctured, gular stripe smooth. Antennæ blackish brown one half longer than the head, not thickened externally, outer joints about as long as wide. Prothorax elongate-oval, finely punctured, dorsal smooth stripe indistinct, slightly elevated near the base. Elytra as long as the prothorax, scarcely wider, similarly punctured, suture finely margined. Dorsal segments imperceptibly punctulate; ventral segments very finely punctulate. Legs blackish brown, finely punctured. Length 3 mm.

♂.—All the thighs thicker than in the ♀; hind thighs bent, concave beneath, armed at the inner end of the concavity (just beyond the trochanter), with a slender curved spine; curved edge thence nearly to the knee slightly serrate; tibiæ very slightly flattened, broader towards the tip; inner margin feebly sinuate, and finely serrate; second and third ventral segments broadly flattened at the middle, sixth deeply triangularly emarginate.

♀.—Hind legs normal; sixth ventral segment rounded at tip.

Mass., Mr. Frederick Blanchard. The ♂ is much less frequent than the ♀.

S. brunnipes.

A very similar species with pale brown legs occurs in Vancouver and California, and fortunately among my specimens there is one ♂ which differs entirely in sexual characters from that above described. The legs are not stouter nor toothed in the ♂, and the second and third ventral segments are not impressed. The fifth ventral is emarginate and broadly concave, with a tubercle at the middle of the concave surface. The sixth is deeply emarginate and the seventh broadly grooved.

Another very similar one, of which only two ♀'s have been examined, occurs in Michigan and Colorado. The legs are black, but the elytra are much more finely and densely punctulate and nearly opaque. Until ♂ characters are observed, this species may properly remain unnamed.

SUNIUS Stephens.

Cylindrical, convex, slender.....2.

Subdepressed, abdomen broader, antennæ thickened externally; 3.3 mm.;

Cala.; Or.....1. **californicus** Austin.

2.—General color dark, elytra more coarsely punctured.....3.

General color pale.....5.

3.—Head less densely punctured beneath.....4.

Head more densely punctured beneath; 4—4.5 mm.; Atlantic region.

2. **prolixus** Er.

- 4.—Elytra dark with broad apical yellow margin; 3.4 mm.; Middle and Southern States, (*linearis* Er.).....3. **binotatus** Say.
 a.—Elytra dark with narrow sutural and apical margin reddish.
 β.—Yellow-brown, head, elytral marginal spot, and sometimes the tip of abdomen dark; *binotatus* Say
 5.—Elytra shorter than prothorax, head dark; 3.4 mm.; Mass.; Mich.
 4. **brevipennis** Austin.
 Elytra longer than prothorax, head pale; 3—4.2 mm.; Atlantic and Pacific regions.....5. **longiusculus** Mann.

S. monstrosus Lec., belongs to *Stilicopsis*.

I am unable to separate *S. similis* Austin, and *S. trisignatus* Boh., from *S. longiusculus*.

S. centralis Austin, is a pale form of race β, of species 3. *binotatus*, of which *S. linearis* Er., is the darkest form.

In all of these species the sixth ventral segment of the ♂ has a small triangular emargination at the middle.

OXYPORUS Grav.

At the time I published the synoptic table of the species of this genus,* I had not recognized any sexual characters.

Last year my attention was called by my friend and excellent observer, Mr. Frederick Blanchard of Lowell, Mass., to some remarkable differences he had noticed in the mandibles of several species, and to hairy patches seen on the fifth ventral segment of very well preserved ♂'s of *O. lateralis* and *occipitalis*.

In *O. lateralis* the left mandible of the ♂ has a tooth just behind the apex, which is wanting in *occipitalis*; and in the former the patch of soft silky hair extends two-thirds the length of the fifth ventral segment forward from the hind margin, while in the latter it is less developed.

The tooth of the left mandible of both sexes, which in most of the species supports in repose the inner edge of the right mandible, is smaller in these two species than in the others, in which, moreover, both Mr. Blanchard and myself have failed to discover any sexual differences, except those indicated by the larger head and less rounded sides of the prothorax of the males.

In *O. 5-maculatus* the tooth of the left mandible is nearer the base, and is reduced to a very small cusp on the inner edge, and in *O. lepidus* it is entirely wanting.

* Trans. Am. Ent. Soc. 1877, 214.

HYPOTELUS Er.

H. capito.—Slender, linear, depressed, piceous, or piceo-testaceous; head blackish, quadrate, longer than wide, sparsely and coarsely punctured, middle and hinder part smooth; behind the middle is one pair of large deep foveæ; mandibles half as long as the head; antennæ but little longer than the head, gradually thickened externally. Prothorax subquadrate, hind angles and base rounded, honey-yellow, finely not densely punctulate. Elytra sparsely finely punctulate without sutural stria; abdomen distinctly margined, dorsal segments not densely but distinctly punctured. Legs yellow, front tibiæ very distinctly spinose. Length 2—2.3 mm.

Columbus, Texas; E. A. Schwarz; under the bark of *Celtis texana*, in the galleries of *Scolytus fugi*. The elytra are a little longer than the prothorax, which is very obsoletely and imperfectly channeled. No sexual differences observed in the three specimens examined.

BRYAXIS Leach.

A.—Prothorax with deep lateral foveæ, connected by a strongly impressed line; elytra with a deep stria near the side; hind tibiæ with a small apical spur; ♂ with front tibiæ sinuate on inner side, and obtusely toothed above the middle.

Middle fovea of prothorax small.....2.

Middle fovea of prothorax as large as the lateral ones; 2 mm.; Mass.;

Mich.; Ill.; (Europe).....1. **sanguinea** Leach.

2.—♂ antennæ with outer joints not compressed; front trochanters not spinose;

♀ antennæ slender; 1.8 mm.; Can.; Mass.; Mich.; Ill.

2. **conjuncta** Lec.

♂ antennæ with broad compressed club; front trochanters armed with a slender spine; ♀ antennæ shorter and stouter than in *conjuncta*; same size and distribution; *clavata* || Brendel.....3. **Brendelii** Horn.

B.—Prothorax with three large foveæ not connected by a line; elytra without lateral stria; BRACHYGLUTA Thomson; ♂ with first dorsal segment very large, lobed or tuberculate behind.

First dorsal ♂ prolonged behind.....2.

First dorsal ♂ largely bilobed behind.....3.

First dorsal ♂ bituberculate above.....4.

First dorsal ♂ emarginate at tip, second with a flat circular impression, slightly convex at the middle; 1.3 mm.; Cala.....4. **foveata** Lec.

First dorsal ♂ slightly deflexed and foveate at tip, second with a large transverse emarginate excavation; 1.3 mm.; N. Y.; one specimen.

5. **perforata** Brend.

First dorsal flattened, slightly deflexed and foveate at tip; second with a transverse convex surface, which is biemarginate in front, and slightly foveate at the hind margin; antennæ more slender than in *Ulkei*; 1.5 mm.; Texas.....6. **Belfragei** n. sp.

2.—First dorsal ♂ not emarginate at tip; 1.5 mm.; Middle and Western States.

7. **dentata** Say.

First dorsal ♂ emarginate at tip, second very protuberant, emarginate behind; 2 mm.; D. C.; one specimen.....8. **Ulkei** Brend.

- 3.—First dorsal segment ♂ deeply excavated; second also deeply and widely excavated; color nearly black, elytra dark red, palpi testaceous; 1.8 mm.; Western States.....9. **Illinoiensis** Brend.
 First dorsal ♂ excavated, with a tubercle in middle of excavation; second deeply, widely excavated; third very protuberant, largely bilobed; color ferruginous; 1.8 mm.; Mass.; N. Y.; D. C.....10. **abdominalis** Aubé.
- 4.—First dorsal ♂ with tubercles near hind margin, and two deflexed apical processes, between which is a deep excavation; second not excavated; third very protuberant, concave each side, truncate and suddenly declivous behind, with a broad triangular impression; color ferruginous; 1.8 mm.; D. C.; one specimen.....11. **intermedia** Brend.
 First dorsal ♂ with tubercles near the base; semicircularly excavated, and subacutely bilobed behind, and flattened near the sides; second very protuberant, bilobed, deeply excavated at the middle; color ferruginous; 1.8 mm.; Fla.....12. **floridana** Brend.
- C.**—Prothorax with three equal but smaller foveæ; body more elongate; first dorsal with two very short distant lines at base; color ferruginous; ♂ antennal club irregular, front trochanters armed with an acute spine; ventral segments 1—4 flattened at the middle.
 ♂ Last joint of antennæ ovate; 2 mm.; Mass.; D. C.....13. **lunigera** Lec.
 ♂ Last joint of ant. reniform; 2 mm.; D. C.....14. **cavicornis** Brend.
- D.**—Prothorax with large lateral foveæ and a small medial one.
 Head trifoveate.....2.
 Head bifoveate, the frontal fovea being absent; first dorsal with two distant short lines.....13.
 2.—First dorsal with two approximate diverging lines.....3.
 First dorsal with two widely distant short lines.....7.
 3.—Lines of first dorsal proceeding from a small rounded ciliated tubercle; no sexual differences in antennæ.....4.
 Lines of first dorsal proceeding from a transverse tubercle.....6.
 4.—Prothorax not punctured.....5.
 Prothorax distinctly punctured, medial fovea conspicuous; red brown, antennæ and legs ferruginous; ♂ last ventral feebly impressed; 1.2 mm.; Mich.; one specimen.....15. **gemmifer** n. sp.
 5.—Larger, medial fovea of prothorax conspicuous; color ferruginous; abdominal lines long; antennæ and legs paler; ♂ last two ventrals broadly concave with an elongate medial elevation; 1.5 mm.; Ill.; one specimen.....16. **radians** n. sp.
 Smaller, medial fovea of prothorax conspicuous; piceous, antennæ and legs yellowish ferruginous; elytra more strongly punctured; abdominal lines short; ♂ last ventral broadly but not deeply concave; 1.2 mm.; Mass.....17. **divergens** n. sp.
 Smaller, medial fovea of prothorax very small; uniform ferruginous; elytra less strongly punctured; ♂ last ventral feebly impressed; 1.3 mm.; Florida.....18. **atlantica** Brend.
 6.—Ferruginous, or darker with red elytra; ♂ last dorsal broadly emarginate at tip; last ventral feebly impressed; 1—1.3 mm.; Atlantic region.
 19. **rubicunda** Aubé.
 Smaller, ferruginous; ♂ last dorsal as in *rubicunda*; 0.9 mm.; Mass.; D. C.; Ill.....20. **congener** Brend.

- Larger, ferruginous, tubercle of first dorsal segment triangular, the lines approximate and divergent; middle fovea of prothorax distinct; ♂ last ventral with a deep, sharply defined, but not large oval fovea; 1.8 mm.; Missouri; one specimen.....21. **trigona** n. sp.
- 7.—Antennæ ♂ ♀ alike.....8.
Antennæ ♂ with joints variously enlarged.....9.
- 8.—Head and prothorax densely punctured; color blackish, legs yellow; 1 mm.; Ill.; N. Y.....22. **scabra** Brend.
Head and prothorax punctulate, color ferruginous, or darker with red elytra; ♂ last ventral broadly concave; 1 mm.; Mass.; Ill.; La.; Fla.....23. **puncticollis** Lec.
- 9.—Dark brownish red, legs and sometimes elytra paler.....10.
Ferruginous, antennæ more slender.....12.
- 10.—Frontal fovea normal.....11.
Frontal fovea very large; ♂ with fourth antennal joint widely dilated, 5—8 small, closely united, broader than long, ninth and tenth nearly as wide as eleventh; 1.2 mm.; Cala., Los Angeles.....24. **sagax** n. sp.
- 11.—♂ with fifth antennal joint moderately dilated, sixth scarcely longer than seventh; 7—9 rounded; 1.2 mm.; Lake Superior.....25. **propinqua** Lec.
♂ with fifth antennal joint dilated, sixth larger than the following, rounded; 7—9 large, transverse; hind tibiæ flattened; 1.2 mm.; Vanc.; B. Col.; Colo.....26. **albionica** Motsch.
- 12.—Frontal fovea normal; ♂ with fifth and sixth antennal joints somewhat stouter, elongate-oval; ninth and tenth nearly as wide as eleventh; hind tibiæ curved and flattened; last ventral slightly flattened; 1.5 mm.; Texas; Fla.....27. **complectens** n. sp.
Frontal fovea very small; the two other foveæ smaller than usual; ♂? 1.2 mm.; Arizona; one specimen.....28. **subtilis** Lec.
- 13.—Front with two small punctures; color piceous, elytra bright red, apical margin blackish, legs ferruginous; ♂ first and second antennal joints large, third and fourth very small, fifth larger rounded, sixth and seventh transverse, pointed inwardly, eighth smaller, ninth larger, tenth nearly as wide as eleventh; ventral segments flattened at the middle; 1.2 mm.; California; Los Angeles.....29. **deformata** n. sp.
Front transversely impressed between the antennæ; color dark ferruginous, legs paler; ♂ antennæ stout, joints 6—8 narrower than fourth and fifth; last ventral flattened and slightly concave; 1.2 mm.; Cala., San Jose.....30. **compar** Lec.
Front not impressed; prominent, subacute, perpendicular at apex, uniform rufous; ♂ third and fourth antennal joints small, fifth and sixth thick, longer than wide, 7—9 smaller and narrower, tenth wider, eleventh elongate-oval; 1.2 mm.; Texas; (Belfrage).....31. **tumida** n. sp.
- E.**—Head without foveæ; first dorsal with two distant short lines.
Prothorax with small lateral foveæ upon the declivous sides, middle fovea very small; elytra with distinct but abbreviated dorsal stria, uniform rufous; 1.1 mm.; Middle and Southern States; *minuta* Brendel.
32. **tomentosa** Aubé.
Prothorax without foveæ, elytra with obsolete dorsal stria; dark rufous; 1.5 mm.; Iowa; one specimen.....33. **inornata** Brend.

EUTRICHITES n. g. (Pselaphidæ).

Head trifoveate, anterior fovea smaller, front retuse and declivous; antennæ 11-jointed, not approximate, though less widely separated than in *Bryaxis*; first and second joints stouter, cylindrical, 3—10 smaller, nearly equal, the tenth being a little broader, eleventh oval pointed, one-half longer than wide, and as long as the four preceding united; the outer half is pubescent with long hair. Eyes rounded, convex. Maxillary palpi nearly as in *Bryaxis*, second joint long, clavate, third nearly rounded, fourth much longer and wider, ovate pointed, with an apical seta. Prothorax with a transverse impression each side near the base, and a small medial fovea; the base behind the impressions is punctured, the rest of the surface is convex, smooth and sparsely pubescent. Elytra convex, wider behind, punctured and pubescent, basal impression faint, sutural stria distinct, discoidal one wanting. Abdomen with dorsal segments convex, finely margined, the first somewhat longer; third and fourth ventral segments short; the fifth broadly impressed in ♂. Legs without spines, hind tibiæ longer and more curved in ♂; tarsi long, with a single claw.

Differs from *Bryaxis* by the ninth and tenth joints of the antennæ not enlarged, by the antennæ less distant at base, the dorsal segments less broadly margined, more convex and less unequal. The front is less protuberant than in the genera with more approximate antennæ, and does not overhang the antennal foveæ.

Eu. Zimmermanni.—Rufous, shining, pubescent; head trifoveate, anterior fovea smaller and less distinct; prothorax campanulate, slightly transversely impressed and punctured at the base, with a small medial fovea. Elytra convex, punctured, with no dorsal but a distinct sutural stria. Abdomen without impressions on the first dorsal segment. Antennæ as long as the head and thorax, tenth joint scarcely wider than the ninth. Length .08 mm.

From District of Columbia to Texas. A specimen in Dr. Zimmermann's collection was labeled *Eu. dixianus*, but I have found no description among his MSS.

PSELAPTUS n. g. (Pselaphidæ).

Head broadly excavated in front, obtusely elevated each side above the antennal foveæ, which are distant; front convex but not retuse. Antennæ 11-jointed, first and second joints a little stouter and longer, cylindrical, 3—8 shorter, ninth and tenth a little broader and slightly longer, eleventh oval pointed, one-half longer than wide, and double the width of the tenth, outer part pubescent with long hairs. Eyes large, convex. Maxillary palpi as in *Bryaxis*, second joint long, clavate, third rounded, fourth elongate-oval, acute, with an apical seta.

Prothorax very convex, campanulate, feebly transversely impressed near the base, without foveæ. Elytra convex, wider behind, without striæ or punctures. Abdomen with dorsal segments convex, finely margined, the first longer, with two short parallel striæ not very widely separated; intermediate ventral segments short.

Differs from *Bryaxis* by the sculpture of the head, and the entire absence of striæ on the elytra, even the sutural.

Ps. Belfragei.—Rufous, clothed with fine short sericeous pubescence. Head broadly impressed in front; prothorax without foveæ, elytra not punctured, without striæ; first dorsal segment with two short parallel lines. Length 1 mm.

Texas, two specimens, with the hind tibiæ long and slightly curved; the frontal impression is less deep at the middle than at the sides.

SCALENARTHUS n. g. (Pselaphidæ).

This genus is also closely allied to *Bryaxis*, and differs chiefly by the dorsal abdominal segments being more convex, almost ventricose, without impressions, and with the side margin extremely narrow, though distinct; the first segment is as long as the others united. The antennæ are 11-jointed; the second joint is equal to the first; 3—7 smaller, eighth, ninth and tenth gradually wider and transverse, eleventh large, oval, pointed at each end, inserted obliquely upon the tenth, (♂) not so large, oval, pointed at tip, obtusely rounded at base in the ♀.

S. Hornii.—Red-brown, without distinct sculpture, finely pruinose with extremely small pubescence. Head with transverse frontal impression, and two small foveæ behind; eyes well developed. Prothorax rounded, without impressions, lateral foveæ small, obsolete, not visible except from the sides. Elytra convex, rounded on the sides, without foveæ or striæ, suture very finely margined. Length 0.7 mm.

Arizona, Dr. G. H. Horn.

EUTYPHLUS n. g. (Pselaphidæ).

Body elongate, linear, resembling *Euplectus*. Head with a wide excavation each side on the declivity, with only a single ocellus representing the eyes; vertex bifoveate, convex at the middle, front concave, arcuately impressed, declivous at tip. Antennæ not as long as the head and prothorax, rather stout, first and second joints thicker, 3—8 not longer than wide, ninth and tenth somewhat transverse, eleventh large, oval, annulated beyond the middle and obtusely pointed. Last joint of maxillary palpi ovate, pointed. Prothorax not wider than long, with a deep transverse impression near the base ending in large lateral foveæ, and crossed by an interrupted impressed dorsal groove.

Elytra not very convex, sutural and dorsal striæ deep, base foveate. Abdomen with four exposed dorsal segments of about equal length and a smaller terminal one; widely margined at the sides, and without lines or foveæ; ventral segments six, the fifth widely emarginate behind. Hind coxæ approximate, slightly prominent, tibiæ without spurs, tarsi with first joint elongate, claw single.

E. similis.—Elongate, not convex, red-brown, shining, finely pubescent, sculptured as above described, antennæ and legs yellowish. Length 1.2 mm.

Washington, Mr. H. Ulke, to whom I am indebted for an excellent series of specimens; it is found under ground, about the roots of trees.

This insect has a deceptive resemblance to *Euplectus interruptus*, but besides the absence of eyes, it differs by the shorter and stouter antennæ, and the elongate well impressed dorsal stria of the elytra.

INO Lap.

I. reclusa.—Depressed, shining, testaceous, elytra slightly dusky near the tip; head large, obsoletely punctulate, with a faint trace of a longitudinal impressed line. Prothorax narrower than the head, but a little wider than long, strongly narrowed from the front angles to the base, which is very narrow and imperceptibly margined; sides sinuous with a subacute tooth about the middle; surface very obsoletely punctulate. Elytra narrow at base, gradually wider behind, rounded at tip, longer than head and prothorax. Abdomen with four exposed segments, slightly dusky at the sides. Length 2.3 mm.

Columbus, Texas; E. A. Schwarz; beaten from branches of trees. very rare. The head is widest at the eyes, which are small and rounded; the antennæ are half as long as the body. This genus is remarkable among *Cucujidæ* for having no appearance of lateral striæ on the prothorax.

HYPERASPIS Chevr.

- Claws dilated at base, or appendiculate.....2.
 Claws slender, not dilated at base, body elliptical, less convex than usual; abdomen finely sparsely punctulate; *Oxyrrhus* Lec.....20.
 2.—Elytra with red or yellow lateral margin; with or without discoidal spots; form hemispherical.....3.
 Elytra without colored lateral stripe.....6.
 3.—Elytra with broad red lateral stripe extending nearly to the apex; head and sides of prothorax ♂ pale.....4.
 Elytra with lateral stripe extending to or a little beyond the middle.....5.
 4.—Metasternum shining, punctured, abdomen opaque, smooth; elytra with large discoidal blotch confluent behind with the colored lateral stripe; 3 mm.; Illinois; (Bolter), ♀.....1. **Bolteri** n. sp.
 Metasternum coarsely densely, and abdomen more finely punctured; inner margin of lateral stripe feebly undulated; ♂ ♀; 2—2.8 mm.; L. S.; Ks.; Tex.; Col.; Cala.; Vanc.....2. **fimbriolata**.

- Metasternum coarsely and abdomen finely punctured; posterior part of lateral stripe almost separated as a spot; (probably var. of *fimbriolata*); 2.5 mm.; L. Superior, ♀3. **dissoluta**.
- 5.—Lateral stripe of equal width; elytra with a discoidal and a subapical spot; metasternum coarsely and abdomen finely punctured; ♂ head, sides and apical margin of prothorax yellow; 2.5—2.8 mm.; Col.; Cala.; Nev.; Vanc.; ♂ ♀4. **lateralis**.
Varies a. without discoidal spot; ♀.
“ β. without discoidal and apical spots; ♂.
Lateral stripe suddenly dilated inwards; beneath punctured as usual; ♂ head and narrow side margin of prothorax yellow; 2.3 mm.; Cala.; ♂ ♀5. **tæniata**.
Lateral stripe gradually but largely dilated inwards, sides of prothorax red; beneath punctured as usual, abdomen and legs brownish-red; ♂ head dark red; 2.5 mm.; Texas; (Boll.); ♂ ♀6. **cruenta** n. sp.
- 6.—With three marginal spots representing an interrupted lateral stripe; abdomen punctulate, nearly smooth at the middle7.
Without marginal spots9.
- 7.—With basal spots; discoidal spots behind the middle8.
Without basal spots; discoidal spot in front of the middle, side margin of prothorax yellow; ♂ head, sides and apical margin of prothorax yellow; 2—2.6 mm.; Pa.; Ga.; Can.; Ks.; ♂ ♀7. **elegans**.
Varies a. marginal spots connected.
“ β. discoidal spot confluent with the middle lateral one.
- 8.—Oval, discoidal spot oval; 2.7 mm.; L. Superior; ♀8. **disconotata**.
Rounded, discoidal spot rounded; more coarsely punctured above; ♂ head and narrow side margin of prothorax yellow; 2 mm.; Mass.; ♂.
9. **discreta** n. sp.
9.—Prothorax black (♀); with sides and front margin pale (♂); abdomen less densely punctured10.
Prothorax with lateral spot or margin pale (♂ ♀); head pale (♂)12.
- 10.—Form hemispherical11.
Oval convex; elytral spot extending to the side margin about the middle; tibiæ testaceous; 3.2 mm.; Texas; ♀10. **Lewisii**.
- 11.—Elytral spot red, very large, placed before the middle, extending to the side margin, anterior outline oblique; a smaller spot near the tip; ♂ with a frontal spot and side margins of prothorax yellow; 3—3.2 mm.; Florida; (Schwarz, Bolter); ♂ ♀11. **tædata** n. sp.
Elytral spot rounded, situated about the middle, a little nearer the sides than the suture; ♂ head, sides and apical margin of prothorax yellow; 2.2—4 mm.; Pa.; Ill.; Tex.; ♂ ♀12. **signata**.
a. with a small rounded spot near the tip; *signata* Oliv.
Elytral spot behind the middle, and near the side; ♂ head and side of prothorax yellow; 2.4—2.8 mm.; Cala.; ♂ ♀13. **osculans** n. sp.
- 12.—Form hemispherical, elytra spotted13.
Form hemispherical, elytra vittate; abdomen finely and sparsely punctulate19.
Form oval; abdomen finely and sparsely punctulate16.
- 13.—Legs black; abdomen more strongly punctured14.
Legs yellow; abdomen less strongly punctured15.

- 14.—Elytra each with a round spot at the middle, and two small ones one-fifth from the tip, sides of prothorax yellow; ♂ head, sides of prothorax widely, and narrow apical margin yellow; 2—3 mm.; Pa.; Ill.; Ks.; Fla.14. **proba.**
 a.—Middle spot prolonged backwards, confluent with the inner posterior spot; Kansas, (Snow); Florida, (Bolter); ♀.
 b.—Posterior spots wanting; ♀.
 Elytra each with two yellow spots behind the middle, sometimes confluent forming a transverse blotch which extends to the margin; ♂ head and very wide side margin of prothorax yellow; 3.5 mm.; Ga.; Tex.; ♂.
15. **gemina** n. sp.
 Elytra each with one round red spot near the tip, prothorax with a large orange lateral spot; ♂ head orange; 2.8—3 mm.; Maine; Florida; Texas; ♂ ♀16. **bigeminata.**
- 15.—Elytra each with a discoidal spot about the middle, a lateral one opposite, and another near the tip; labrum and large lateral spot of prothorax yellow; 3.5 mm.; Kansas; ♀17. **pratensis.**
 Elytra with a discoidal and lateral spot, and a narrow side margin extending from the base to beyond the middle; ♂ head and sides of prothorax widely yellow; 2.2—2.8 mm.; Maine; Col.; Ill.; ♂18. **lugubris.**
- 16.—Oval convex17.
 Elliptical, less convex; legs yellow; sides of prothorax yellow; ♂ ♀ ...18.
- 17.—Elytra each with an oval spot not extending in front of the middle; and a subapical rounded spot; labrum and sides of prothorax yellow or red; 2—2.5 mm.; Cala.; ♀19. **4-oculata.**
 Elytra each with a large yellow posterior blotch near the tip; sides of prothorax widely yellow; ♂ head yellow; 2.3—2.8 mm.; Cala., (Hardy, Bolter); ♂ ♀20. **postica** n. sp.
- 18.—Beneath feebly punctured, elytra with a continuous yellow margin, slightly broader behind, and an oval discoidal spot at the middle; prothorax with narrow side margin yellow; ♂ head and apical margin of prothorax also yellow; 1.6—2 mm.; Florida; (Schwarz); ♂ ♀21. **paludicola.**
 Beneath strongly punctured, elytra with two yellow marginal spots connected by a narrow line, a discoidal spot in front of the middle, and a large one near the tip; prothorax with narrow side margin yellow; ♂ head yellow; 2 mm.; Texas; ♂ ♀22. **punctata** n. sp.
- 19.—Marginal vitta dilated near the tip into a spot and united with the dorsal vitta; sides of prothorax widely yellow; ♂ head also yellow; 2—2.5 mm.; Cala.; ♂ ♀23. **annexa.**
 Marginal vitta not dilated at tip; side margin of prothorax narrowly yellow; ♂ head and prothorax reddish yellow, the latter dusky at base; 2 mm.; Ill.; Ks.; Tex.; ♂ ♀24. **4-vittata.**
 a.—Discoidal vitta wanting.
- 20.—Elytra with an abbreviated posterior vitta sometimes reduced to a small elongate spot; also with three marginal spots, usually obsolete; prothorax with narrow side margin yellow; 2.5 mm.; L. Sup.; ♀.
25. **mœrens.**
 Elytra with a small rounded spot near the tip, and some faint traces of marginal spots; prothorax with narrow yellow side margin; ♂ front yellow; 2 mm.; Col., (Hardy); ♂ ♀26. **tristis** n. sp.

The synonymy and bibliography of most of these species will be found in the Revision of the Coccinellidæ of the U. S. by Mr. G. R. Crotch, Trans. Am. Ent. Soc. 1873, 379. But one species has been described since the publication of his memoir.

21. *H. paludicola* Schwarz, Proc. Am. Phil. Soc. 1878, 362, Florida.
- H. inedita* Muls., Trim. 684; Crotch, 380, remains unknown to me.
2. *H. fimbriolata* Mels., Pr. Ac. Nat. Sc. Phila. iii, 180; *rufomarginata* Muls., Trim. 661; *cincta* Lec., Pr. Ac. Nat. Sc. Phila. 1858, 89.
4. *H. lateralis* Muls., Trim. 65; *Hornii* Crotch, Tr. Am. Ent. Soc. 1873, 381.
7. *H. undulata* (Say), Journ. Ac. Nat. Sc. Phila. iv, 92; *elegans* Muls., Trim. 658; *maculifera* Mels. Pr. Ac. Nat. Sc. Phila. iii, 179.
12. *H. signata* (Oliv.), vi, 98, pl. 7, 107; *binotata* Say, Journ. Ac. Nat. Sc. Phila. v, 302; *normata* (Say), ibid. 302; ♂ *leucopsis* Mels., Pr. Ac. Nat. Sc. Phila. iii, 179.
16. *H. bigeminata* (Randall), Bost. Journ. Nat. Hist. ii, 32; *Guezi* Muls., Trim. 687.
18. *H. lugubris* (Randall), Bost. Journ. Nat. Hist. ii, 52; *jucunda* || Lec., Pr. Ac. Nat. Sc. Phila. vi, 134; *Lecontei* Crotch, Revis. 233; var. *venustula* Muls., Trim. 671.
25. *H. mœrens* Lec., Agassiz L. Sup. 238; *consimilis* Lec., Pr. Ac. Nat. Sc. Phila. vi, 134.

PEPLOGLYPTUS n. g. (Histeridæ).

Body oblong, costate, elytra a little wider than the prothorax. Head broadly concave, front acute anteriorly; antennæ very strongly geniculate, scape nearly as long as the funicle, which is slender, club oval, pointed, annulated. Prothorax less than one-half wider than long, sides oblique, slightly sinuate in front of the middle, apex emarginate, base oblique each side, lateral edge acute, disc longitudinally deeply concave near the margin, but more deeply so near the lateral sinuosity; this concavity is limited on the inner side by a sinuous impressed line. Scutel very small. Elytra oblong, with the suture, three discoidal ridges and the margin acutely but feebly elevated; epipleuræ flat. Pygidium perpendicular not sculptured. Beneath nearly smooth; prosternum wide with the anterior lobe large, front coxæ widely separated, hind margin broadly truncate and feebly emarginate, antennal cavities small, transverse, situated under the front angles near the anterior margin of the flanks. Tibiæ long, slender, front pair gradually slightly dilated as far as the middle, then obtusely angulated on the outer side and nearly parallel to the apex; middle and hind pair slender, very feebly dilated, tarsi more than half as long as the tibiæ, claws equal as usual.

P. Belfragei.—Oblong, dark brown, without lustre, and without sculpture, except as above described. Length 2 mm.

Clifton, Texas; one specimen, found by Mr. G. W. Belfrage, under a stone, in a wet sandy place. This very pretty little insect is closely allied to *Glymma* of Europe, but differs by the antennal cavities on the flanks of the prothorax, under and not upon the front angles, the smaller number and less development of the costæ; by the front tibiæ being distinctly angulated on the outer side, and especially by the absence of the peculiar foveate sculpture of the under surface as represented by Marseul, Ann. Ent. Fr. 1856, pl. 11, xxxix.

HISTER Linn.

H. (Psiloscelis) perpunctatus.—Oblong, opaque black, finely and densely punctured, punctures at the sides of the prothorax and on the elytra somewhat larger; elytral striæ very fine, three inner ones scarcely apparent. Beneath strongly punctured at the sides, smooth, and somewhat shining at the middle. Prosternum rounded behind and not at all margined. Length 6.5 mm.

Tyngsborough, Mass.; Mr. F. Blanchard; found with a brown ant 4.5 mm. long. Smaller and more convex than *H. planipes*, and easily known by the finer and denser punctuation, the obliterated inner striæ, the under surface nearly smooth except at the sides, and the prosternum not at all margined behind. *Heterius Blanchardi* occurs with the same ant.

H. tornatus.—Cylindrical, stout, black, very shining; head flat, finely punctulate, frontal stria hemihexagonal; prothorax very slightly punctulate, marginal stria deeper near the front angles, ambient in front; outer marginal very near the lateral bead, a little abbreviated behind. Elytra with extremely faint and fine striæ, which seem to be entire in type, though barely visible, the outer ones are a little less obliterated; humeral stria oblique, distinct; epipleuræ bistriate. Propygidium and pygidium convex, sparsely finely punctured. Front tibiæ very broad obtusely 3-dentate, tarsal groove distinct, straight; other tibiæ not toothed, with two rows of spines as usual. Beneath very slightly punctured. Prosternum without striæ, anterior lobe very prominent; mesosternum truncate in front, marginal line entire. Length 4.4 mm.

Indian River, Florida; one specimen, found by Mr. A. Bolter, to whose liberality I am greatly indebted for it. Stouter than the cylindrical forms of *Platysoma*, which it resembles in appearance, though belonging to the typical division of the genus. It is, in fact, more allied to the *americanus* group than to any other.

ABRÆUS Leach.

A. Bolteri.—Convex oval, brown, moderately shining; head scarcely perceptibly punctulate. Prothorax finely punctulate, without basal line, base obtusely angulate at the middle. Scutellum invisible. Elytra moderately punctured, punctures finer and somewhat rugose behind; oblique rudiments of striæ near the base feeble; epipleuræ broad punctured, with a distinct lateral stria abbreviated in front. Pygidium smooth, not inflexed. Beneath somewhat coarsely but not strongly punctured especially towards the sides; prosternum

nearly square, not lobed in front; base slightly emarginate in the arc of a circle; mesosternum without stria. Front tibiæ broadly triangular, with the apical external angle about the middle of the length; middle and hind tibiæ slender, slightly curved; hind tarsi distinctly 5-jointed. Length 1.4 mm.

San Bernardino, Cala. It gives me much pleasure to dedicate this very interesting addition to our fauna to Mr. A. Bolter, by whom it was collected. The size is unusually large for this group, being a little larger than *Acritus maritimus*. The front tibiæ are nearly like those of the East Indian *A. parva* represented by Marseul, Ann. Ent. Soc. France, 1856, pl. 14, xlii, 3 e.

HOPLIA III.

The males in this genus differ from the females by the larger size and greater thickness of the hind tibiæ and tarsi. Frequently also, great sexual differences are seen in the clothing of the body, which is more scaly in the female, and more hair-like in the male. In some species besides the differences in clothing, the middle tibiæ of the female have a distinct terminal spur.

Claw of hind tarsi not cleft.....2.

Claw of hind tarsi cleft near the tip.....8.

2.—Prothorax with front angles acute, sides oblique not much rounded.....3.

Prothorax with front angles less acute and sides much rounded.....4.

3.—Elytra brown, scales of prothorax small, not dense, of elytra hair-like; hairs of prothorax long; middle tibiæ ♀ with a terminal spur.

1. *Sackenii* n. sp.

Black, densely clothed with rounded pale brown, yellow, or silvery scales, except on the head; prothorax and elytra frequently spotted; hairs of prothorax and elytra very short.....6. *dispar* n. sp.

4.—Prothorax clothed with long hair.....5.

Prothorax clothed thinly with short hair.....6.

5.—Body densely clothed with small scales; elytra and pygidium with long hair; 7.2—9.5 mm.; Cala.....2. *callipyge* Lec.

Body not squamose, but sparsely pilose, hairs of elytra and pygidium rather short.....3. *hirta* n. sp.

Body densely clothed with small scales; elytra and pygidium with short hair; 5.5—7 mm.; Cala; Oregon.....4. *pubicollis* Lec.

6.—Epistoma flat, margined and truncate in front.....7.

Epistoma concave, subemarginate and strongly margined; body clothed with small elongate scales; prothorax with sides oblique, rounded.

5. *laticollis* Lec.

7.—Sexes dissimilar; prothorax wide, narrowed in front, sides subangulated and rounded; epistoma narrowly margined; 6.5—9.2 mm.; Atlantic region.....7. *trifasciata* Say.

♂.—Black, hairy with cinereous pubescence, sprinkled beneath with small silvery scales; *tristis* Mels.

♀.—Brown, very densely clothed with pale brown, and yellowish silvery scales; middle tibiæ with a large terminal spur; *trifasciata* Say.

Sexes similar; epistoma more strongly margined in front; body thinly clothed with lanceolate pale scales, and sparsely pilose; prothorax with sides oblique, slightly rounded; 6 mm.; N. Y.; Pa.

8. **trivialis** *Harold.*

Sexes similar; epistoma narrowly margined, and slightly rounded in front; body clothed with oval ochreous scales; prothorax wider in front of the base, sides strongly angulated; 6—6.8 mm.; Atlantic region.

9. **mucorea** *Germ.*

8.—Sides of prothorax broadly rounded.....9.

Sides of prothorax strongly angulated; front and middle tarsi with two claws; black, pygidium and under surface densely clothed with rounded silvery scales; sides of prothorax, suture and margins of elytra and two oblique branches with silvery scales; 7.5—8.5 mm.; Western States10. **limbata** *Lec.*

9.—Front and middle tarsi with two claws; brown, clothed with very small scales, oval on the prothorax, narrow and hair-like on the elytra, larger and metallic beneath; 6.5—8 mm.; Atlantic region.

11. **modesta** *Hald.*

Front and middle tarsi with but one claw; scales thinly placed, oval; 7.5 mm.; Mass.....12. **equina** *n. sp.*

1. **H. Sackenii**.—Black or brown, elytra brown, shining, punctured, thinly clothed with moderately long acute, hair-like scales. Head densely punctured, thinly clothed with small scales, epistome with parallel sides, truncate in front, with the angles rounded. Prothorax not longer than wide, sides oblique in front of the middle, then rounded, and nearly parallel to the base, apex broadly emarginate, base oblique each side, broadly rounded at the middle, front angles acute, hind angles nearly rectangular; surface densely and finely rugosely punctured, pubescent with long yellowish hairs, and thinly sprinkled with narrow white scales, which are nearly three times longer than wide. Pygidium densely but feebly punctured, clothed with similar scales having a silvery reflection. Beneath clothed with silvery scales, metasternum with long yellowish hairs. Outer claw of front and middle tarsi half as long as the inner one; front tibiæ tridentate, upper tooth feeble. Length 9 mm.

♀.—Middle tibiæ with a distinct spur.

California, Summit Lake, Sierra Nevada, Baron R. OstenSacken; San Diego.

6. **H. dispar**.—Black, variably clothed with small rounded scales. Head opaque, densely rugosely punctured, not squamose, thinly pubescent, epistome rounded nearly in the arc of a circle. Prothorax a little wider than long, narrowed from the base, but more strongly in front of the middle, apex strongly emarginate, base oblique each side, feebly rounded at the middle; front angles acute, hind angles obtuse, not rounded; surface thinly pubescent with short erect black hairs. Elytra also with a few short black hairs. Pygidium and under surface densely clothed with rounded silvery scales; metasternum densely pubescent with white hair. Legs and claws as in the preceding. Length 6.3—8 mm.

♂.—Prothorax, scutellum and elytra very densely clothed with fulvous or greenish scales; varies with the disc of the prothorax more or less naked,

and the elytra with three bands of spots more or less developed, and sometimes confluent.

♀.—Varies like the ♂.

California (Mountains) and Nevada. Very nearly related to *H. aureola* Pallas, of Northern Asia, and differs chiefly by the head being not covered with scales. I have adopted the MS. name of Mr. Crotch, under which it has been largely distributed.

3. *H. hirta*.—Black, without scales; head, prothorax and metasternum clothed with very long fine whitish hairs, the rest of the body clothed with shorter, less fine pubescence. Head densely punctured, epistome short, strongly margined, sides nearly parallel, front truncate and feebly emarginate, angles much rounded. Prothorax scarcely wider than long, slightly narrowed from the base to the middle, then more strongly narrowed to the apex which is broadly emarginate; front angles acute, hind angles slightly rounded, base oblique each side; surface rather densely punctured. Elytra punctured, thinly pubescent as usual. Pygidium densely but not deeply punctured, pruinose with pale hairs. Beneath densely punctured. Legs as in the preceding species, but the outer claw of front and middle tarsi is a little shorter. Length 7.5 mm.

Nevada; one ♂ kindly given me by Dr. Horn.

12. *H. equina*.—Elongate, brown, not densely clothed with small oval ochreous scales, permitting the ground color to be quite apparent. Head densely punctured, moderately pubescent, epistome with oblique rounded sides, front broadly truncate, strongly margined, angles much rounded. Prothorax thinly pubescent with very short hairs; sides subsinuate behind, oblique and strongly narrowed in front of the middle; apex strongly emarginate, front angles acute, base oblique each side, angles rectangular, slightly rounded. Elytra with shallow punctures as usual. Beneath thinly clothed with scales as above, scarcely pubescent, outer claw of front and middle tibiae entirely wanting. Length 7 mm.

Tyngsborough, Mass. I am greatly indebted to Mr. Frederick Blanchard for a pair of this species, of which he found but three individuals. It is a most interesting addition to our fauna, and is especially remarkable for the strong resemblance which it bears to *H. modesta*, from which it differs not only by the absence of the smaller tarsal claw, but by the uniform shape of the scales, the less pubescent prothorax and the slightly sinuate sides; this last character is more obvious in the ♀ than in the ♂.

The following synonymy is proposed, after a careful revision of the materials in the collections of Dr. Horn and myself.

4. *H. pubicollis* Lec., Jr. Ac. Nat. Sc. 1856, 285; *convexula* Lec., *ibid.* 285; *oregona* Lec., *ibid.* 284; *irrorata* || Lec., Pac. R. R. Expl. & Surveys, 40; *mutata* Harold, Col. Hefte, v.

7. *H. trifasciata* Say; ♀ *primaria* Burm.; ♂ *tristis* Mels., Pr. Ac. Nat. Sc. Phila. ii, 141; Lec., *ibid.* 1856, 71; ♀ *helvola* Mels., *ibid.* ii, 142.

8. *H. trivialis* Harold, Col. Hefte, v; *debilis* || Lec. loc. cit. 285.

9. *H. mucorea* Burm., Handb. iv, i, 193; Lec., loc. cit. 287; *Melolontha mucorea* Germ., Ins. nov. 129; *H. monticola* Mels., Pr. Ac. ii, 141; Lec., loc. cit. 287.

11. *H. modesta* Hald., Pr. Ac. Nat. Sc. Phila. i, 304; Lec. loc. cit. 285; *singularis* Burm., Handb. iv, i, 192; ii, 486.

CHAETOCÆLUS n. g. (Malachidæ).

Front tarsi ♂ 5-jointed, first and second joints a little thicker. Body without wings, ♂ elongate, elytra three-fourths as long as the abdomen, with parallel sides, suture entire, tips rounded; ♀ stouter, elytra very small, flat, divergent, scarcely longer than the metathorax; abdomen convex, not margined, pilose with long stiff black bristles, especially at the sides (as in *Tachyporus*), much larger in ♀ than in ♂. Head short, eyes small, rounded, last joint of maxillary palpi elongate-oval, nearly pointed; epistoma corneous. Antennæ inserted just in front of the eyes, similar in both sexes, 11-jointed, rather stout, subserrate, a little longer than the head and prothorax; the latter transverse and oval, truncate in front, rounded on the sides and at the base.

A singular genus having the elytra of the ♀ still shorter and more incomplete than in *Endeodes*, from which it differs in nearly all the generic characters above enumerated.

C. setosus.—Piceous, shining, not pubescent, but thinly clothed with erect bristles, which at the sides of the prothorax and abdomen are very long; head with two faint frontal impressions; prothorax one-third wider than long, moderately convex transversely, base finely margined; scutel slightly concave; elytra dark testaceous. Length 2 mm.

♂.—Eyes moderate, elytra elongate, parallel, dusky at tip, feebly and sparsely punctured; three dorsal segments exposed.

♀.—Eyes smaller, elytra very short, abdomen thick, gradually narrowed behind the middle; seven dorsal segments exposed.

Columbus, Texas; E. A. Schwarz; only a few specimens were found in the densest recesses of the forest of the river bottoms, on grape vines.

CLERONOMUS Klug.

C. ornaticollis.—Deep black, pubescent with short erect hair. Head nearly smooth, mouth and front testaceous; between the eyes there are two small converging deep impressions. Prothorax wider than long, narrowed behind, rounded on the sides, deeply transversely constricted near the apex, strongly constricted at the base; sparsely punctulate, shining yellow, with a large quadrate dorsal black spot, extending from the base to the apex, which is narrowly margined with testaceous; included in this large black spot is a narrow yellow spot occupying about three-fifths of the length. Elytra very densely rugosely punctured, opaque. Antennæ as long as the head and prothorax, entirely black; second joint a little shorter than the third; 3—10 equal in length, the outer ones slightly broader and triangular; eleventh a little larger, oval, oblique and pointed at tip; under side of head and palpi testaceous, last joint dark. Legs and coxæ entirely black; prosternum and flanks of prothorax yellow. Length 6 mm.

Cincinnati, Ohio; one specimen, kindly given me by Mr. Harold B. Wilson. The outer joints of the antennæ are less obviously wider than in the species figured by Spinola.

DICENTRUS n. g. (Cerambycidae).

This new genus belongs to the tribe *Asemini*, as defined by me;* that is to say, the base of the antennæ is not enveloped by the eyes, and the ligula is corneous, with the bases of the palpi not retractile. It belongs to the group *Opsimi*, having the base of the prothorax emarginate at the middle, and the emargination filled by a depressed thin plate; this emargination is however, less obvious than in *Opsimus*, so that the thin plate becomes merely a thin basal margin.

Other distinctive characters are: Head short, front nearly perpendicular, eyes moderately granulated, divided as in *Tetropium*; palpi very unequal, maxillary moderately long, last joint elongate triangular, with distal margin rounded. Antennæ ♂ a little longer, ♀ a little shorter than the body; slender, first joint stouter, as long as the two following; second one-half as long as the third. Prothorax a little wider than long, truncate before and behind, sides rounded, armed with a small acute lateral spine at the middle, and another near the base equally acute. Elytra not convex, wider than prothorax, truncate at base, parallel on the sides, separately rounded at tip. Legs moderate, thigh not clavate, hind tarsi with first joint as long as the two following united. Front coxæ contiguous, cavities rounded, with a narrow external fissure; middle and hind coxæ separated. Surface opaque, finely densely punctured, finely pubescent, without long hairs, except a few on the antennæ.

D. Bluthneri.—Piceous, antennæ and legs brown; elytra with a large spot extending from the sides almost to the suture, and from the first sixth to the middle reddish brown; a large apical brown spot occupies the posterior fourth of the elytra. Length 3–5.5 mm.

Sierra Nevada; San Joaquin Co., Cala.; Mr. M. S. Blüthner, to whom I dedicate it with much pleasure. Dr. Horn has specimens found in Nevada by Mr. H. K. Morrison, and I one from Lake Tahoe, (elev. 6465').

MONACHUS Chev.

The species of this genus are broadly oval and convex; the claws are appendiculate; the scutellum elongate, not elevated behind, and acutely triangular; the eyes strongly emarginate; the antennæ rather long with the last six joints (6–11) broader. The prosternum is

* Class. Col. N. Am. 292.

flat, broader than long, slightly rounded behind, without distinct angles. The fifth ventral segment of the ♀ is impressed with a large circular rather deep fovea.

Head and prothorax smooth, or nearly smooth; outer joints of antennæ not wider than long; elytra black or blue.....2.

Head and prothorax distinctly punctured; outer joints of antennæ transverse; prothorax red with two discoidal spots; elytra with rows of punctures strong, blue with a red transverse band; 2.7 mm.; Ariz...5. **Guerini** Perb.

2.—Oval, indigo-blue, base of antennæ testaceous; prothorax opaque, smooth; elytral rows of punctures feeble; ♂ ♀; 2.5—3 mm.; Atlantic region.

1. **ater** Hald.

Ovate, steel-blue, base of antennæ testaceous; prothorax with punctures near the base; elytral rows of punctures strong; ♂ ♀; 2.5—3 mm.;

Middle and Southern States.....2. **saponatus** Fabr.

Broadly ovate, black, head, prothorax, antennæ and legs rufo-testaceous; prothorax opaque, smooth; elytra blue, rows of punctures strong; ♂;

2 mm.; S. C.; Fla3. **thoracica** Crotch.

Of same form and sculpture as *thoracica*, black, elytra blue; prothorax slightly punctured at base; antennæ and legs more or less red; 1.7—

2 mm.; Ga.; Fla.....4. **auritus** Hald.

Varies a. Head and sides of prothorax reddish yellow; ♂ *auritus* Hald.

“ β. Legs and antennæ in great part black; ♂ ♀; *affinis* Hald.

DIACHUS Lec. n. g.

This genus is established upon small species heretofore placed in *Cryptocephalus*. They differ by the claws being broadly appendiculate, the antennæ not more than half the length of the body, with the joints 6—11 broader; the prosternum is quadrate and flat as in *Triachus*, but in *D. chlorizans* is broadly concave behind, with slightly prominent angles. The eyes are feebly emarginate. The striæ are composed of fine punctures, and sometimes obliterated behind; the outer ones are occasionally deeply impressed, and in that case extend around the apical margin. The scutellum is obtusely triangular, except in *D. chlorizans*, where it is acute. The impression of the fifth ventral segment of the ♀ is elliptical and shallow, except in that species, which with more abundant material for study might perhaps indicate a distinct genus. The form is cylindrical oval, and the color tinged with metallic gloss, brassy, steel-blue, or green.

Scutellum acutely triangular; body yellow, elytra metallic green; fifth ventral segment of ♀ with a large deep fovea; 2 mm.; Va.; Mo.

8. **chlorizans** Suffr.

Scutellum obtusely triangular; body usually dark metallic; fifth ventral segment of ♀ with an elliptical shallow fovea.....2.

2.—Elytral striæ obliterated behind the middle.....3.

Outer striæ of elytra impressed, ambient at tip.....4.

- 3.—Bronzed, scutellum flat; prothorax not polished, sides, antennæ and legs testaceous; *chalconatus* Mann.; *æneolus* Lec.; 1.4—2 mm.; Atlantic and Pacific regions.....1. **auratus** Fabr.
 Varies a. Blue, with sides of prothorax and antennæ testaceous, (Suffr.). Indigo, or greenish blue; scutellum slightly elevated behind; antennæ and legs piceous, the former testaceous at base; 2 mm.; Cala...2. **crassus** n. sp.
- 4.—Scutellum flat; scutellar lobe of prothorax bidentate.....5.
 Scutellum elevated behind.....6.
- 5.—Black, head, prothorax, antennæ and legs dull reddish-yellow or brown, elytra bluish with bronzed lustre; 1.5 mm.; Ga.....3. **levis** Hald.
 Testaceous, with a slight bronzed lustre; 1.5 mm.; Fla...4. **squalens** Suffr.
- 6.—Prothorax smooth.....7.
 Prothorax distinctly punctulate; body elongate-cylindrical; color olive-brassy, antennæ and legs dull ferruginous; 2.7 mm.; Garland, Colo.
 5. **seruginosus** n. sp.
- 7.—Dark bluish-green, antennæ and legs piceo-testaceous; 2—2.7 mm.; L. S.; Ill.; Ga.....6. **cataris** Suffr.
 Blue, antennæ and legs yellow; 2 mm.; Ks.....7. **pallidicornis** Suffr.

TRIACHUS Lec. n. g.

This genus contains *Cryptocephali* of very small size (1—1.2 mm. long), in which the claws are broadly appendiculatè, the antennæ of moderate length, about half as long as the body, with the last five joints broader. The eyes are very feebly emarginate. The prosternum is flat, quadrate, not wider than long, margined at the sides, truncate behind, with the angles well defined, but not prolonged. The striæ consist of small punctures, regularly arranged, and the outer one is deeply impressed, but does not extend around the apex except as a row of punctures; the marginal stria is also deep. The impression of the fifth ventral segment of the ♀ is elliptical and not deep. The color varies from piceous to testaceous, and the body is oval and convex.

- Prothorax smooth, feebly punctured at the sides.....2.
 Prothorax sparsely finely punctured, more deeply at the sides.....3.
- 2.—Piceous, legs paler, inner elytral striæ almost obliterated; Va.; Fla.
 1. **atomus** Suffr.
 Testaceous yellow, elytral striæ equally distinct; Fla.....2. **cerinus** n. sp.
- 3.—Prothorax not margined at base; Ill.; Ks.....3. **vacuus** n. sp.
 Prothorax with a row of punctures at base, which is finely but distinctly margined; oval, convex, testaceous, elytra clouded with brown; Texas.
 4. **postremus** n. sp.

CRYPTOCEPHALUS Geoffroy.

The species of this genus are very numerous, and in some of the groups are rather indefinite in character, so that it is quite possible more careful revision with increased collections may still farther reduce the number of species below the limits I am now warranted

in adopting. After separating as distinct genera the very small species, which seem by the appendiculate claws to be allied to *Monachus*, the remaining species of our fauna may be divided into two sets, the first of which is distinguished by the anterior margin of the inflexed flanks of the prothorax being toothed or sinuate, and by several singular male sexual characters specified below. The other set, or typical *Cryptocephali* may be divided according as the anterior prosternal lobe is prominent and carinate, or truncate and flat.

§ 1. BASSAREUS Hald.

The front prosternal lobe is feeble, provided with a short apical process, but not carinate; the anterior margin of the prothoracic flanks are toothed or sinuate beneath the antennæ. In the ♂ the prosternum is armed at the middle with a large erect compressed process; the first ventral segment at the middle forms a large flat plate, the hind angles of which rise into acute processes or spines; the fifth ventral is broadly concave, with a crest of curved erect hairs each side of the concavity; the first joint of the front tarsi is sometimes dilated, and is as long as the two following united. In the ♀ all these characters are absent, and the fovea of the fifth ventral is large, deep and circular.

The species may be tabulated as follows:

- | | |
|--|---------------------------|
| Elytra with numerous yellow spots..... | 2. |
| Elytra with four scarlet spots; (prothorax obtusely toothed beneath)..... | 3. |
| Elytra entirely yellow..... | 4. |
| Elytra vittate with black and yellow..... | 5. |
| 2.—Edge of prothoracic flanks acutely toothed under the antennæ; ♂ ♀; <i>brunnipes</i> Oliv.; <i>clathratus</i> Mels.; 3.8—5 mm.; Middle and Southern States..... | 1. congestus Fabr. |
| Edge of prothoracic flanks* only feebly sinuate under the antennæ; spots of elytra normal; ♂ ♀; <i>guttatus</i> Hald.; 3.7—5 mm.; Pa.; Ga.; Ill. | |
| | 2. formosus Mels. |
| a.—Elytra yellow spots confluent into bands; <i>sulphuripennis</i> Mels. | |
| β.—Elytra yellow, with three interrupted brown stripes. | |
| 3.—Prothorax opaque, sparsely punctured; elytra with anterior band extending nearly to the suture, and apical spot; ♂ first joint of front tarsi not broader; ♀ head spotted with white; ♂ ♀; <i>notatus</i> Fabr.? Hald.; 4.5— 5.5 mm.; Atlantic States..... | 3. detritus Oliv. |
| a.—Ferruginous brown, elytra darker with spots as above, (type Olivier). Prothorax smooth shining; elytra as above; ♂ first joint of front tarsi broader; ♂ ♀; 3.5—5.5 mm.; Mid. and West. States..... | 4. mammifer . |

* Suffrian describes the tooth of the prothoracic flanks as rectangular in *sulphuripennis*, and obtuse in *formosus*. I can perceive no special difference, and I have therefore placed them as the same, giving precedence to the name *formosus* over *sulphuripennis*, which is expressive only of certain varieties.

- α.—Anterior spot of elytra reduced in size, reaching only to the fifth stria; side margin of prothorax white; *sellatus* Suffr.
 β.—Anterior spot of elytra larger, connected with some yellow narrow basal spots; prothorax with side margin and two basal spots white; *pretiosus* Mels.
 γ.—Elytra yellow with an indistinct dark transverse band behind the middle; ♀.
 δ.—Elytra entirely yellow; ♀; *luteipennis* Mels.
 4.—Prothoracic flanks obtusely toothed under the antennæ; scutell acutely triangular; ♀; *mammifer* ♂.
 Prothoracic flanks distinctly toothed under the antennæ; scutell rounded behind; body broader, and elytral striæ finer; ♂ ♀; 3.5 mm.; Florida, (Hubbard and Schwarz).....5. ***croceipennis*** n. sp.
 5.—Color various; elytra vittate; prothoracic flanks obtusely toothed under the antennæ; 3—4 mm.; Atlantic region.....6. ***lituratus*** Fabr.
 α.—Black, prothorax yellow, with three black spots, the middle one larger; *lituratus* Fabr.; varies 1, black vittæ of elytra confluent; *castus* Mels.; *recurvus* Say; 2, prothorax black, side margin yellow; 3, black, elytra with a subapical yellow spot.
 β.—Black, head and prothorax ferruginous, elytra vittate; *lativittis* Germ.
 γ.—Ferruginous, elytra black with yellow stripes; 5-vittatus.

§ 2. CRYPTOCEPHALUS (gen.).

- Prosternum elevated at or near the tip forming a short process in ♂, nearly flat in ♀; black, elytra with four red spots, (rarely entirely yellow); striæ ten composed of large punctures, fifth and eighth not dislocated; antennæ very long and slender.....2.
 Prosternum with an apical lobe or cusp, longer in ♂ than ♀.....4.
 Prosternum broadly truncate in front ♂ ♀.....9.
 2.—Glabrous and shining above.....3.
 Finely pubescent above and beneath; prothorax finely punctured; elytra with the base, sides as far as the middle, and apical spot red; ♂ with prosternal process directed backwards; hind margin of prosternum nearly truncate; ♂ ♀; 4—5.5 mm.; Ks.; Tex.....7. ***mucoreus*** Lec.
 3.—Elytra with an oblong humeral spot extending along the sides, and an apical spot red; 3.5—5 mm.; Atlantic region.....8. ***quadrinaculatus*** Say.
 α.—Humeral spot occupying the whole base; ♂ ♀; *notatus* Oliv., * Fabr.?; *4-maculatus* Say, Suffr.
 β.—Humeral spot extending across the base and along the sides, uniting with the apical spot, and leaving a saddle-shaped black spot, and a small marginal blotch behind the middle; ♀; Minn.; Ks.; Fla.
 γ.—Humeral spot not extending across the base; apical spot wanting.
 δ.—Elytra entirely orange yellow; ♂ ♀; *fulvipennis* Hald.
 Elytra with a broad transverse red spot in front of the middle, extending along the sides to the base; also an apical spot; *notatus* Suffr. (Fabr.?); *distinctus* Hald.; 3—4 mm.; D. C.; Fla. 9. ***distinctus*** Hald.
 α.—Inner margin of anterior spot abruptly curved; ♂ ♀.
 β.—Inner margin of anterior spot oblique; ♀.

* I have discarded the specific name *notatus* as leading only to confusion; it seems with the uncertainty of types equally applicable to Nos. 8 and 9.

Smaller and more slender, humeral spot oblong, a little wider behind, sometimes much reduced, hardly attaining the base; apical spot as usual; ♂ ♀; 2.5—3 mm.; Atlantic region.....10. **quadruplex** Newm.

a.—Humeral spot much larger, reaching to the middle of the sides of the elytra; ♂ ♀; *quadriguttulus* Suffr.; Ks.; Ill.

4.—Elytra variously spotted; striæ usually represented by rows of very large distant punctures.....5.

Elytra with regular impressed rows of punctures; yellow each with three oblique narrow black lines, sometimes obsolete.....7.

Elytra with regular rows of punctures; yellow each with two broad black or brown stripes, sometimes confluent, sometimes wanting; (prosternum nearly truncate behind, apical lobe acute in ♀)8.

Elytra with regular punctured striæ; prosternum broadly lobed in front, bispinose concave and deeply emarginate behind; black, cylindrical, prothorax shining red; ♂ spines of hind angles of prosternum perpendicular; ♀ spines horizontal; 3.7—4.7 mm.; Cala.; Or.

11. **sanguinicollis** Suffr.

a.—Entirely black; ♂ ♀; *nigerrimus* Crotch.

5.—Prothorax yellow, with four black or brown stripes.....6.

Ferruginous; elytra black with rounded pale yellow spots arranged 2, 2, 2, 1, the last being apical; striæ not impressed, composed of moderately large punctures, the two next to the outer one much dislocated; prosternum deeply emarginate behind, lobed in front, lobe longer in ♂ than ♀; ♂ ♀; *lautus* Newm.; 4—5.5 mm.; Atlantic region...12. **guttulatus** Oliv.

a.—Inner spot of second band nearly obsolete; (this variety resembles *C. badius* Suffr., but is readily distinguished by the anterior lobe of the prosternum); ♀.

Prothorax brown with side margin and two basal spots yellow; elytra yellow, with very large distant black punctures, and spots arranged 4, 3, 2, in three transverse bands; ♂; 5 mm.; Tex., (Ulke).

13. **cribripennis** n. sp.

6.—Elytra yellow with black spots arranged 3, 2, 2; sixth and seventh striæ not conspicuously dislocated; ♂ ♀; 4.8—5.3 mm.; Ga.; Tex.

14. **bivius** Newm.

Elytra yellow with brown spots confluent into three transverse bands, the front one of which rarely attains the margin; sixth to eighth striæ conspicuously dislocated; ♂ ♀; 4—5 mm.; Pa.; Ga.; Ks.; N. Mex.

15. **leucomelas** Suffr.

a.—Brown bands confluent so as to leave only wedge-shaped yellow spots near the margin; ♂; *vitticollis* Lec.

Elytra yellow with large brown spots confluent longitudinally on the disc, and two posterior spots near the margin; yellow lines of prothorax narrow, the two middle ones interrupted; sixth and seventh striæ not dislocated; ♂ ♀; 5 mm.; Cala16. **castaneus** n. sp.

7.—Prothorax yellow with four ferruginous stripes; elytra with regular deep striæ, seventh interrupted, eighth short, oblique; each elytron with three narrow oblique dark stripes; ♂ prosternum with a cusp near the front margin, hind margin slightly emarginate; 3.2 mm.; Wyoming, one specimen.....17. **amatus** Hald.

a.—Dark stripes of prothorax and elytra wider, confluent.

Yellow, prothorax not varied; elytra with seven deep regular discoidal striæ, the sutural stria being reduced to three or four punctures, and the seventh to a small hook attached to the eighth in front of the middle; alternate interspaces spotted with brown; prosternum nearly truncate in front, feebly emarginate behind; ♀; 3 mm.; Texas; two specimens.

18. **defectus** n. sp.

Ferruginous or brown; prothorax with sides, and sometimes two discoidal spots yellow; elytra with finer regular striæ, which are alternately more approximate, and three narrow oblique black stripes, seventh stria reduced to a short hook; prosternum with two large rounded lobes behind; ♂ with an acute elevated apical process, ♀ nearly truncate; ♂ ♀; 4—5.5 mm.; Ks.; Tex.; N. Mex.; B. Col. 19. **confluens** Say.

α.—Piceous black, elytral stripes broad, confluent, leaving traces of narrow yellow lines; ♂.

Dirty yellow, varied with brown; elytra with eight deep strongly punctured striæ, somewhat approximated by pairs, sixth obliquely dislocated behind, seventh short; stripes three on each elytron, ill-defined, sometimes wanting; prothorax brown, with sides and basal spots yellow; prosternum with apical lobe acute in ♂, obtuse in ♀; 4—5 mm.; Cala., (S. Diego) 20. **spureus** Lec.

α.—Prothorax yellow, immaculate.

8.—Robust, shining, rufous or ferruginous; elytra yellow, usually with two broad oblique black stripes, striæ fine, not impressed; prothorax finely punctulate, with sides and two oblique basal spots yellow; ♂ ♀; *venustus* Fabr., Suffr.; *flaccidus* Suffr.; 4.3—5.3 mm.; N. Y.; Ill.; Ks.; Ga.; Tex. Varies greatly in color. 21. **venustus** Fabr.

α.—Prothorax entirely ferruginous; *ornatus* Fabr. (nec Suffr.).

β.—Elytral stripes more or less confluent.

γ.—Elytra black with sides, apical hook and narrow basal spot yellow; ♂; *hamatus* Mels.

δ.—Elytra black, with sides and apical margin yellow; ♂ ♀; *cinctipennis* Randall.

ε.—Elytra yellow, with a small brown humeral spot; ♀; *simplex* Hald.

Robust, dull yellow, tinged with ferruginous, less shining; elytra with usually ill defined brown stripes; with ten regular strongly punctured deep striæ; prothorax densely punctured; ♂ ♀; *incertus* Hald., (nec Olivier); *ornatus* ‡ Suffr.; 5 mm.; Ga.; Fla. 22. **obsoletus** Germ.

9.—Prothorax smooth or finely punctured. 10.

Prothorax very coarsely and usually densely punctured. 17.

10.—Elytra with two broad oblique stripes. 11.

Elytra with three narrow, sometimes ill-defined stripes. 15.

Elytra spotted or fasciate. 16.

Bright yellow, elytra black, with eight deep punctured discoidal striæ, (the real seventh being very short); prosternum flat, feebly lobed in front, obtusely bilobed behind; antennæ dark, base pale; ♂ ♀; 2.5—3.2 mm.; Ark.; Fla*. 23. **nanus** Fabr.

*This species would perhaps be equally well placed after *defectus* but the elytra are not striped, and the prosternum of the ♂ is not lobed. The ♂ of the latter is not known, but the resemblance to No. 13 in marking is very obvious.

- 11.—Prosternum flat or slightly convex at the middle.....12.
 Prosternum carinate for its whole length; form cylindrical-oval, prothorax ferruginous, nearly smooth, sides and two basal spots yellow; elytra with two broad oblique black stripes, striæ fine not impressed; ♂; 5.5 mm.: Ks.; one specimen*.....24. **carinatus** n. sp.
- 12.—Prosternum entirely flat.....13.
 Prosternum feebly convex along the middle.....14.
- 13.—Prothorax smooth, ferruginous, sides yellow, elytra with confluent stripes, and coarser somewhat impressed striæ; ♂; 4.2 mm.; Ga.; one specimen. Probably only an extreme variation of the next, in which case this name has precedence.....25. **insertus** Hald.
 Prothorax feebly punctulate, ferruginous, sides and two basal spots yellow; elytra with fine not impressed striæ, and two broad oblique black stripes sometimes confluent, sometimes interrupted, sometimes wanting; ♂ subcylindrical; ♀ usually a little more oval; *ornatus* † Say, *venustus* † Hald.; ? *biapinus* Suffr.; 4—6 mm.; Atlantic region...26. **calidus** Suffr.
 α.—Outer elytral stripe interrupted; ♂ ♀.
 β.—Outer stripe interrupted, inner ones confluent along the suture; ♂.
- 14.—Prothorax smooth, pale yellow, sometimes with three faint clouds; elytra with stronger, somewhat impressed striæ; stripes distinct or obliterated; ♂ ♀; Ga.; Tex.....27. **albicans** Hald.
 Prothorax obsoletely punctulate, very convex and declivous in front; elytra with fine striæ, the outer ones somewhat impressed, and two broad oblique black stripes, epipleuræ black; form robust; ♂ ♀; 5—7 mm.; Mass.; N. Y.....28. **gibbicollis** Hald.
 α.—Elytral stripes wanting, only a short humeral stripe and epipleuræ remaining black; ♀; Ga.
 Prothorax finely but obviously punctured, very convex and declivous in front, ferruginous with sides and indistinct spots yellow, or yellow with a transverse ferruginous cloud; elytra with striæ of coarse punctures, outer ones scarcely impressed, stripes represented by small spots; form robust; ♂ ♀; 5.4—7.5 mm.; Ga.; Fla.....29. **aulicus** Hald.
- 15.—Smaller, red-brown, above brownish yellow, prothorax densely punctured, with three brown stripes or spots; elytra deeply striate, with three oblique brown stripes; † prosternum quite flat, strongly margined at the sides, acutely bilobed behind; ♂ ♀; *vitatus* Hald.; ? *lixus* Newm.; 3.5—4.3 mm.: Middle States.....30. **trivittatus** Oliv.
 Still smaller, more cylindrical, red-brown; prothorax sparsely punctulate, scarcely spotted; elytra with eight deep discoidal striæ, and three indistinct more or less confluent stripes; prosternum slightly convex along the middle, truncate in front, obtusely bilobed behind; ♂ ♀; *lineolatus* Hald.; 3—3.5 mm.; Mid. and West. States.....31. **incertus** Oliv.
 Very small, dirty yellow, prothorax sparsely punctured, sometimes with brown marks; elytra with deep regular punctured striæ, (seventh very short), and traces of three narrow brown stripes; prosternum flat, truncate in front, very little emarginate behind; ♂ ♀; 1.8—2.2 mm.; Ga.; Fla.....32. **pumilus**.

* Additional specimens are required to establish the validity of this species.

† The inner one is wanting in all my specimens, or feebly indicated.

‡ This species reverts towards 18. *defectus*.

- 16.—Brown, antennæ and legs ferruginous, elytra pale yellow, with three interrupted brown vittæ forming spots occupying the alternate intervals; medial spots usually confluent into a large common transverse brown blotch; striæ composed of rather distant punctures, the two next to the outer one irregularly connected, and with a short intermediate series; prothorax ferruginous, with or without basal spots, sides yellow; prosternum not lobed in front, emarginate and acutely toothed behind; ♂ ♀; *dispersus* Hald.; 4—7 mm.; Pa.; Ill.; Ga.; Ks.; Tex.

33. **mutabilis** Mels.

Varies with spots more or less confluent.

Varies also with the prothorax smooth or distinctly punctured.

- a.—Prothorax smooth, with the bead of the margin, a very broad dorsal stripe, and a spot each side black; spots of elytra and under surface black; antennæ and legs ferruginous; ♀; Arkansas, (Bolter).
Ferruginous or brownish yellow; prothorax smooth or nearly so, and very shining; elytra yellow, with three transverse undulating brown fasciæ formed by confluent spots; striæ impressed, punctured, the two next to the outer one interrupted, and connected transversely; prosternum not lobed in front, feebly emarginate behind; ♂ ♀; 3.8—5 mm.; Texas.

34. **fulguratus** n. sp.

- Less robust, brown; prothorax shining, sparsely punctulate, apical and lateral margins and hind angles sometimes yellow; elytra with impressed strongly punctured brown striæ, the two next the outer one (sixth and eighth to wit, the seventh being represented by only a few punctures), interrupted and connected transversely; ground color brown, with yellow marks as follows; a basal band composed of confluent spots extending to the sixth stria, a marginal transverse spot just before the middle extending inwards to the fifth stria; an interrupted transverse band behind the middle, and an apical spot; prosternum not lobed in front, deeply emarginate and acutely lobed behind; ♂ ♀; 3—4.2 mm.; Pa.; Ky.; Fla *.....35. **badius** Suffr.
a.—Interval between the third and fourth stria with a small yellow spot before the middle.

- 17.—Cylindrical testaceous, tinged with brown; prothorax densely aciculate; elytra with ten regular deep punctured striæ; ♂ ♀; *rugicollis* || Hald.; 3—4 mm.; Mass.; Ga36. **Schreibersii** Suffr.
More robust, testaceous tinged with rufous; prothorax densely and coarsely punctured; elytra with ten coarsely punctured striæ, seventh and eighth confused; usually obsoletely trifasciate; ♂ ♀; 3—4.5 mm.; Mass.; Fla.; Ill.; Tex.....37. **tinctus** n. sp.
Of the same form and color as the preceding, prothorax densely and coarsely punctured; striæ of elytra irregular, the outer ones confused, and therefore seemingly more numerous; elytra indistinctly fasciate with rufous; prosternum deeply emarginate, excavated, and acutely bilobed behind; ♂; ?*fasciatus* Say; 3.5 mm.; Ga...38. **lateritius** Newm.

* The elytral pattern of this species has the same type as the two preceding, and differs only by the greater extension of the brown color; the three are however readily distinguished by the prosternal characters, and the differences in the elytral striæ, as above described. They form however, a little group sufficiently from any of the preceding ones.

Very small dull reddish yellow, beneath dark brown; prothorax coarsely but not densely punctured, sides oblique, less rounded than usual; elytra with dusky suture, striæ strongly punctured, entirely regular, interspaces slightly convex; prosternum quadrate, truncate before and behind; ♀ with the ventral fovea shallow, margin distinct in front, ill-defined behind; ♀; 2 mm.; Northern Illinois, Mr. F. M. Webster, one specimen; Va.*.....39. **striatulus** n. sp.

Unrecognized species.

C. (Bassareus) areolatus Suffr., Linn. Ent. vi, 301, Texas.—Differs from *congestus* by smaller size, and rectangular tooth of prothoracic flanks.

C. (Bassareus) egenus Suffr., ibid. 311, Delaware.—Probably a variety of *mammifer*.

C. luteolus Newm., Mag. Nat. Hist. 1840, 250, Florida.

C. quadriforis Newm., Entomologist, 78, N. C.—Seems to resemble *4-maculatus*, but the elytra are said to have the punctures "haud linea dispositis." Perhaps a distorted individual.

PACHYBRACHYS Chevr.

The species of this genus are numerous, and apart from the generic characters are recognized by the outer striæ of the elytra being usually completely confused, and the inner ones tortuous or irregular, separated by more or less sinuous and interrupted ridges. Rarely, however, *striatus* and category 7, the striæ are quite regular, and these added to the dense punctuation of the prothorax, give the insect a strong resemblance in appearance to *Cryptocephalus Schreibersii*, etc. In this case the difference in form of the prosternum alone remains as a generic character.

There are certain mottled forms of small size, varying in color from black with white dots, to ochreous yellow with pale brownish mottlings, which cannot be separated definitely into species without farther observation of the limits of variation, and the habits of the particular sets; fuller series collected at the same time and place are needed to enable these forms to be studied with profit. I have been unable to identify the nominal species described by Suffrian of these sets, but have the authentic types of Melsheimer's and Haldeman's species for comparison at any future time.

As this table is intended solely for the identification of species, I have omitted such minor details as the spots on the head, pygidium and ventral surface, except where they seemed to be important for the separation of closely allied forms. I have for the present left the species under category 17 undefined, but a list of those which differ-

* The epipleural lobes are less developed and the outer striæ are more nearly straight than in any other species known to me; the claws are quite simple as in all the preceding species.

ent authors suppose to be distinct is given at the end of the table. This complex of forms seems to me to be similar to that existing in the genus *Colaspis*, placed by Mr. Crotch as *C. tristis* Fabr., in which neither form, size, or color sculpture seem to be fixed within definite limits.

- Upper surface pubescent; prosternum sulcate.....2.
 Upper surface glabrous.....4.
 2.—Prothorax with scutellar lobe broad, base margined as usual.....3.
 Prothorax with scutellar lobe more prominent, very finely margined, sides oblique, not rounded, disc feebly aciculate, subcarinate, more than one-half as long as the elytra; striæ of elytra finer and more distant than usual, with only a few confused punctures near the scutel; ochreous yellow, metasternum and greater part of abdomen blackish; 2.5—4 mm.; Lower Cala.....1. **Xanti** Crotch.
 3.—Black opaque, densely punctulate, sides of prothorax, basal and lateral margins of elytra yellow; 3.5 mm.; Cala.....2. **Donneri** Crotch.
 Larger, black, densely punctured, *pubescens* || Oliv.; 4—4.5 mm.; Atlantic region, Texas.....3. **morosus** Hald.
 a.—Elytra more coarsely punctured.
 Piceous black, densely and finely punctured; sides of prothorax and elytral margin especially near the apex, ferruginous; elytra with irregular rows of more distinct punctures; 3.5—4.5 mm.; Cala.....4. **analis** Lec.
 4.—Colors of upper surface definitely arranged, prosternum sulcate.....5.
 Color uniform, or irregularly mottled.....11.
 5.—Yellow and black or brown, striped.....6.
 Red and black.....9.
 Yellow and black, spotted.....10.
 6.—Elytra with striæ in great part well-defined.....7.
 Elytra confusedly punctured, two outer striæ distinct.....8.
 Brown, base of antennæ, upper surface and legs ochreous; head with occiput and large frontal spot brown; prothorax strongly punctured, with an M-shaped brown mark; elytra with a dark humeral spot, and narrow sutural line, striæ regular, though sinuous; 3.5—4.5 mm.; Tex.; Ks.....5. **striatus** n. sp.
 a.—Entirely black; Colo.
 7.—Brown, legs yellow; upper surface pale yellow; prothorax strongly not densely punctured, with three brown stripes, the middle one wider; elytra each with suture and two brown stripes, short striæ near the scutel confused; scutel brown; 4 mm.; Ks.; Neb.....6. **virgatus** n. sp.
 Brown, or black, legs, prothorax and elytra pale yellow; prothorax shining rather strongly punctured, with brown spots, the middle one divided in front, and confluent with the lateral ones, forming a dark M; elytra with suture and two discoidal stripes dark, the inner one shorter; the marginal stria approximates the margin about the middle, so that the epipleural lobe appears more prominent than usual, and the margin is blackish; *viduatus* ‡ Say, Hald.; 2.5—3.5 mm.; Atlantic region to Col.; Tex.; Fla.....7. **litigiosus** Suffr.
 a.—Elytral vittæ confluent, legs spotted with black.
 β.—Prothorax sparsely less strongly punctured.
 γ.—Almost entirely black.

Like the preceding, prothorax with three stripes, the middle one V-shaped, widely bifurcated in front, punctures rather strong; elytral vittæ as in the preceding, but the striæ are deeper, the marginal stria is not confluent with the margin, and the latter is not darker behind the epipleural lobe, which is of the usual form; 2.5—3 mm.; Tex.*...8. **dubiosus** n. sp.

a.—Middle stripe of prothorax not wider in front, narrowly divided as far as the middle.

Black, legs, ventral margins and part of upper surface yellow; prothorax nearly three times wider than long, densely rugosely punctured, margins and narrow median line from front margin to middle yellow; elytra with common sutural and two discoidal black stripes, narrow lateral bead black, epipleural lobe wider than usual; *marginatocollis* Randall; 3—4 mm.; Eastern, Middle and Western States.10. **othonus** Say.

a.—Smaller, prothorax with basal spots; lateral head of elytra not dark; pygidium entirely yellow.

8.—Elytra yellow, each with two stripes and marginal bead black.....9.

Elytra yellow, with one broad stripe and marginal bead black; strongly punctured, prothorax and thighs ferruginous; beneath, tibiæ and tarsi blackish, last ventral and dorsal segments margined with yellow; 3.5—4 mm.; Cala.....11. **circumcinctus** Crotch.

a.—Elytral stripe broader, sinuous on the outer side.†

Elytra yellow, with two discoidal stripes and marginal bead black, the outer stripe narrower, interrupted, forming two or usually three spots; prothorax moderately punctured, ferruginous, sometimes with sides, median line and basal spots yellow; beneath blackish, legs ferruginous; pygidium and margin of last ventral segments yellow; *bivittatus* Say: *albescens* Suffr.; 3.3—5.5 mm.; Western States to Col.; Tex.

12. **viduatus** Fabr.

a.—The ferruginous color of the prothorax is replaced by blackish brown, the elytral stripes are wider, and the outer one is nearly entire; New Hampshire, (Blanchard).

9.—Shining black, head and legs spotted with white; prothorax with sides, and narrow medial line abbreviated behind, white; elytra sparsely punctured, striæ distinct at sides and behind, red, with a wide common black sutural band extending nearly to the tip; 3 mm.; Fla.

13. **limbatus** Newm.

Opake black, elytra densely less coarsely punctured, only the outer stria well-defined; red with a wide common sutural band extending nearly to the apex, and a transverse black line at about three-fourths the length, running to the margin; 3.5 mm.; Texas.....14. **cruentus** n. sp.

a.—Transverse black line wider and dilated at the sides, dividing the red into two spots.

β.—Colored as in a, punctures of elytra partly arranged in rows, prothorax with an ill-defined smooth medial line.

Black, shining, prothorax usually red; elytra strongly punctured, striæ distinct at sides and behind, interspaces not convex; 3.8—5 mm.; Texas.....15. **hybridus** Suffr.

* A larger series will probably show that this species is not valid.

† The variety shows the transition towards the next species, in which the outer dilated part of the elytral stripe becomes detached as a separate stripe.

- α.—Prothorax black, with sides and basal spots red; elytra with an irregular elongate apical white spot.
- β.—Prothorax black with sides red; elytra as in α.
- γ.—Prothorax black; elytra as in α.
- Opake black, prothorax with sides, apical margin, median line abbreviated behind, and two basal spots red; elytra very strongly punctured, striæ very irregular at sides and behind, interspaces narrow, convex; 3.7—5 mm.; Pa.; Fla.....16. **trinotatus** Mels.
- α.—Head with two red spots.
- 10.—Opake, black, legs and upper surface spotted with yellow, prothorax strongly densely punctured, with lateral and apical margin, anterior dorsal line and two basal spots yellow; elytra strongly punctured, striæ very irregular, visible only behind the middle, outer interspaces convex; basal and apical margin, humeral blotch surrounding a black spot, a subsutural smooth spot, and a large blotch near the sides pale yellow; pygidium and last ventral segment spotted with yellow; *M-nigrum* || Hald.; 3—3.7 mm.; Mass.; Ga.....17. **intricatus** Suffr.
- Beneath black, sides of ventral segments and pygidium spotted with yellow; legs yellow, hind thighs sometimes with a black or brown spot; above yellow, varied with black; prothorax strongly punctured, with a dorsal stripe wider and narrowly cleft in front, black; there is also a large quadrate spot each side, extending nearer the base than the tip; elytra with tolerably regular strongly punctured striæ, black, basal margin, apical blotch, and irregular cruciform spot extending from the humerus to behind the middle pale yellow; the transverse branch of the cross is oblique and extends from the margin nearly to the suture; form narrower and more cylindrical than usual; *mollis* Hald.; 1.6—3 mm.; Pa.; Fla.; Ill.; Ks.*.....18. **tridens** Mels.
- α.—Prothoracic black spots confluent; Pa.
- β.—Middle stripe of prothorax not divided, posterior branch of elytral spot wanting; Ks.
- γ.—Colors suffused, the black becomes brown, and the yellow becomes dirty ochreous; the spots are ill-defined, and sometimes reduced to three brown clouds on the prothorax, and a large irregular sutural blotch becoming wider in front; Tex.
- δ.—Prothorax with three brown stripes; elytra with sutural stripe, an irregular interrupted dorsal stripe, and three marginal ill-defined spots brown; *conformis* Suffr.; Fla.; Col.
- 11.—More or less mottled in color.....12.
- Uniform opake black, robust, prothorax very densely punctured, hind angles obtuse not rounded; elytra with distinct coarsely punctured striæ, except near the scutellum; 2.5—3.5 mm.; Ga.; Ill...19. **carbonarius** Hald.
- 12.—Sides of prothorax strongly rounded and incurved near the base; prosternum deeply longitudinally concave.....13.
- Sides of prothorax obliquely broadly rounded or straight not incurved behind, hind angles not rounded, with well-defined points; prosternum flat, scarcely concave, not narrower behind.....16.

* This species, through its suffused varieties, forms an excellent transition to some of those (in 17) with irregularly mottled elytra. It seems, however, to differ by the prosternum more concave in front.

- 13.—Hind angles of prothorax distinct; upper surface shining, elytra with two or three outer striæ distinct.....14.
Hind angles of prothorax rounded, upper surface usually opaque very strongly punctured, elytral interspaces convex.....15.
- 14.—Black, above mottled with yellow, prothorax with narrow lateral and apical margin, short anterior line and two small basal spots yellow; elytra with two convex interspaces near the sides; basal margin, apex and a few irregular small spots yellow; head and legs varied with yellow spots; 3.5—4.5 mm.; Cala.....20. **lustrans** n. sp.
a.—Black, head slightly spotted.
Beneath black, legs and upper surface yellow, mottled with brown, punctures of elytra somewhat less confused, outer interspaces not elevated; tarsi blackish; 4.8 mm.; Veta Pass, Col.; one ♀...21. **renidens** n. sp.
Beneath black, legs ferruginous, tibiæ and tarsi dusky, upper surface dirty yellow, mottled with brown; prothorax with three brown stripes, the middle one divided in front, the side ones shorter; elytra with the striæ not much confused except near the scutellum, interspaces not very convex, with three submarginal spots and a dislocated interrupted dorsal vitta brown; 3.5 mm.; Texas.*.....22. **subvittatus** n. sp.
- 15.—Yellow and brown, elytral striæ sinuous not approximate, interspaces rather wide, with a few confused punctures only near the base; beneath brown, legs and upper surface yellow mottled with brown; prothorax rather densely but irregularly punctured, sides oblique in front, rounded behind, basal angles almost rounded, elytra irregularly fasciate with brown; 3.5—5 mm.; Tex.....23. **turbidus** n. sp.
Black, opaque in great part, mottled with small white dots on upper surface; prothorax densely punctured with a faint remnant of a smooth dorsal line, sides oblique in front, rounded behind, basal angles almost rounded; elytra confusedly coarsely punctured over the greater part of the surface, striæ visible at the sides and behind, approximate, interspaces narrow; *asculi* Mels., *marens* Stal.; 3.2—4 mm.; Pa.; Ga.; Tex.
24. **luridus** Fabr.
a.—Prothorax red at the sides, femora with a yellow spot.
β.—Prothorax entirely red, femora spotted; Texas.
Smaller than *luridus*, opaque black; elytra with fewer confused punctures, and more white spots; legs in great part testaceous; pygidium spotted with testaceous; 2.6 mm.; Ga.; one specimen. (Perhaps not different from *luridus*)......25. **femoratus** Oliv.
Black, legs testaceous, thighs with a dusky spot; above mottled with small white spots; prothorax nearly three times as wide as long, rounded on the sides, basal angles rounded, surface densely punctured, with irregular small smooth pale spaces, and anterior dorsal line; elytra with irregular deep striæ at sides and behind, base and along the suture confusedly punctured; pygidium spotted with testaceous; 3 mm.; Texas, Belfrage, one specimen.†.....26. **brevicollis** n. sp.

* If the markings were more regular, and the punctures near the scutellum less confused this species might be placed near *litigiosus*.

† Easily known by the very transverse prothorax; it greatly resembles some of the forms in category 17, but the prosternum is deeply and broadly channeled and is narrower behind, as in nearly all the preceding species.

- 16.—Punctures of elytra more or less irregular, striæ visible at sides and behind, sometimes regular over nearly the whole surface.17.
 Punctures of prothorax and elytra uniform, two striæ visible at the sides; upper surface dull ochreous clouded with brown; prosternum flat, rectangularly truncate; *punctatus* Hald.; 2—3 mm.; Atlantic and Pacific regions.....27. **hepaticus** Mels.
- 17.—Red and black.....18.
 Yellow, brown or black, mottled, sometimes entirely black, sometimes entirely yellow.*
- 18.—Black, opaque, prothorax with sides and dorsal spots red, densely punctured, basal angles almost rounded; elytra with sinuous deep striæ at the sides and behind, confusedly punctured in front, with a broad irregular band from the side almost to the suture; ♂ ♀; 2.7—3.5 mm.; Middle States.....28. **subfasciatus**.
 Very similar to *subfasciatus*, but broader; elytra with broader transverse band, prothorax with sides red; ♀; 2.7—3.5 mm.; Lake Sup., N. Y.
 29. **dilatatus** Suffr.

The names of the indefinite forms which are not tabulated are as follows:

- P. atomarius* Mels., Pr. Ac. Nat. Sc. Phila. iii, 170.
P. cælatus Lee., ibid. 1858, 84.
P. characteristicus Suffr., Linn. Ent. vii, 176.
P. sparsus Newm., Entom. 79.
P. flavicornis Mels., Pr. Ac. Nat. Sc. Phila. iii, 172.
P. infaustus Hald., Journ. Ac. Nat. Sc. Phila. 2d, i, 262.
P. livens Lec., Pr. Ac. Nat. Sc. Phila. 1858, 54.
P. luctuosus Suffr., Linn. Ent. xii, 401.
P. melanostictus Suffr., ibid. vii, 191; xii, 403.
P. nigricornis Say, Journ. Ac. Nat. Sc. Phila. iii, 436.
P. obsoletus Suffr., Linn. Ent. vii, 200.
P. oculatus Suffr., ibid. vii, 178.
P. pallidipennis Suffr., ibid. xii, 406.
P. peccans Suffr., ibid. vii, 192.
P. pectoralis Mels., Pr. Ac. Nat. Sc. Phila. iii, 171.
P. picturatus Germ., Ins. Nov. 560; Suffr., Linn. Ent. vii, 209; *M-nigrum* Mels., Pr. Ac. Nat. Sc. Phila. iii, 170; (*viduatus* var.?).
P. pulvinatus Suffr., Linn. Ent. vii, 151.
P. signatifrons Mann., Bull. Mosc. 1843, ii, 311; Suffr., loc. cit. vii, 167.
P. sobrinus Hald., Journ. Ac. Nat. Sc. Phila. 2d, i, 262; *pectoralis* ‡ Suffr., Linn. Ent. vii, 187.
P. spumarius Suffr., loc. cit. vii, 179.

* These forms vary in color, size, shape and sculpture, but so imperceptibly, that I am unwilling to attempt any separation of the species. Those mentioned in the books are numerous, but seem to be in great part opinionative. The prosternum is broad, and but very slightly concave, and by this character they may be separated from such of the preceding species as tend to resemble them by irregularity of markings. Careful observation of habits and food-plants, and the collection of larger series in each locality are still necessary in this group of forms.

MYODITES Latr.

The European *Myodites subdipterus* is parasitic on *Halictus*. As that genus is well represented in our fauna, a careful quest in its cells at the proper season would probably result in the procuring of a good supply of the species here described. Several of them are now represented by single specimens, and larger series are needed of all.

Abdomen yellow; (♀; ♂?); first joint of hind tarsi elevated, obliquely truncate and emarginate at tip; elytra yellow, shining.....2.

Abdomen black (♂ ♀).....3.

2.—First joint of hind tarsi stout and thick, not more than one-half longer than second; prothorax brownish, nearly smooth; vertex obtusely rounded, sparsely punctured; 7.3 mm.; Kansas.....1. **Popenoi** n. sp.

First joint of hind tarsi long, thicker than the second, and more than twice as long; prothorax nearly smooth; vertex sparsely punctured not carinate; 7.5 mm.; Md.....2. **semiflavus** Lec.

First joint of hind tarsi long, very little thicker than second; prothorax and vertex densely punctulate, the latter carinate; 8 mm.; Indian Terr.

3. **scaber** Lec.

3.—Elytra shining, yellow or black only at the base.....4.

Elytra alutaceous, more or less blackish or piceous; first joint of hind tarsi long, but slightly thicker, not obliquely truncate.....6.

4.—First joint of hind tarsi stout, not more than one-half longer than the second, obliquely truncate and emarginate at tip; elytra yellow; prothorax sparsely punctured, smooth each side in front; 6 mm.; N. Y.

4. **luteipennis** Lec.

First joint of hind tarsi long, somewhat thicker than the second, obliquely truncate and emarginate at tip; elytra yellow; prothorax sparsely punctured behind, nearly smooth in front; 5 mm.; Nev...5. **nevadicus** n. sp.

First joint of hind tarsi long, scarcely thicker than the second, not obliquely truncate at tip; head and prothorax densely punctulate.....5.

5.—Elytra entirely yellow; 5 mm.; Cala.....6. **californicus** n. sp.

Elytra black at base; 6 mm.; Penn.; Ill.....7. **fasciatus** Say.

6.—Hind tibiae slightly compressed.....7.

Hind tibiae strongly compressed; black, with a small common dull testaceous elytral spot; 6 mm.; Fla.....8. **Schwarzl** n. sp.

7.—Vertex strongly elevated and compressed; 6.5 mm.; N. Y...9. **Zeschii** n. sp.

Vertex feebly elevated.....8.

8.—Pectus and abdomen very densely punctured; 5 mm.; Ill.; N. Y.

10. **Walshii** Lec.

Pectus and abdomen more strongly less densely punctured; 2.5—3 mm.;

Can.; N. Y.; D. C.....11. **styloides** Newm.

M. Popenoi.—Honey yellow, head, sides, front and dorsal line of prothorax black, middle and sides of metasternum, and hind coxae blackish. Head shining, sparsely finely punctured, vertex prominent, obtusely rounded. Prothorax and elytra smooth. Metathorax blackish. Under surface shining very finely and sparsely punctulate. First joint of hind tarsi thick, as long as the two following united, obliquely truncate at tip, slightly emarginate beneath. Length 7.3 mm.

♀ antennæ blackish, tinged with testaceous especially at base, pectinate; wings with broad transverse band dusky.

Colorado, one ♀, collected by Prof. E. A. Popenoe, to whom I dedicate it in recognition of his excellent labors in making known the Coleopterous fauna of Kansas. Differs from *M. semiflava* and *scabra* by obtusely rounded vertex and smooth prothorax, and by first joint of hind tarsi.

M. nevadicus.—Black, head hairy with short erect cinereous hair, front flat, vertex elevated, obtusely conical, punctulate. Prothorax shining, sparsely pubescent, not densely punctured, smooth in front and near the sides. Scutel smooth. Elytra nearly smooth, obtusely rounded, entirely honey-yellow. Beneath finely punctured. Hind tarsi with first joint as long as the fourth, slightly thickened, obliquely truncate and emarginate at tip. Length 5 mm.

♂ antennæ brown, plumose, front legs yellow, lower margin of middle thighs and middle tibiæ testaceous; hind tibiæ at tip and base of tarsi tinged with testaceous; wings hyaline.

♀ antennæ black, pectinate; front legs tinged with testaceous; wings with anterior margin and broad transverse band dusky.

Nevada, H. K. Morrison. I am indebted to Dr. Horn for a pair of this species.

M. californicus.—Black, head hairy with erect grayish pubescence, front flat, vertex broadly rounded, densely punctulate; prothorax finely and densely punctulate. Scutel smooth. Elytra shining, honey-yellow, finely very sparsely punctulate. Beneath densely finely punctured. Hind tibiæ with the first joint as long as the others united, scarcely thicker, not emarginate at tip. Length 5 mm.

One ♀, California; precise locality unknown. The antennæ and legs are entirely black, and the wings very faintly fasciate with dusky.

M. Zeschii.—Black; head very densely punctulate, front flat, vertex pubescent with erect hair, acutely conical and very prominent. Prothorax densely punctulate. Scutel smooth, shining. Elytra opaque, densely rugose and punctulate, dull fulvous, with a large humeral spot and posterior transverse blotch blackish. Beneath densely and finely punctured. Hind tarsi with first joint as long as the others united, slightly compressed, not distinctly emarginate at tip. Length 6.5 mm.

♂ antennæ smoky testaceous, plumose; front and middle legs dull testaceous, middle tibiæ and hind legs piceous; middle of first three ventral segments slightly yellowish.

One ♂ found at Buffalo, N. Y., was kindly given me by Mr. F. Zesch, to whom I take pleasure in dedicating it. The wings are unusually dark and the dusky band occupies nearly the apical third of the surface.

M. Schwarzi.—Black; head very densely punctulate, front flat, vertex pubescent with erect hairs, obtusely prominent and slightly carinate. Prothorax densely punctulate, with a small smooth callus each side in front of the middle. Scutel shining, smooth. Elytra opaque, rugose and punctulate,

black, with a dark reddish yellow spot near the suture. Beneath densely punctured. Hind tibiæ curved and compressed; tarsi testaceous, hind pair with the first joint as long as the others united, slightly thickened. Length 6 mm.

One ♀; Sumter Co., Florida; Mr. E. A. Schwarz. Allied to *M. Zeschii*, and perhaps the other sex of that species; it differs however by the form of the hind tibiæ and by the vertex being less conical and less prominent, so that in view of the widely distant localities, I am not warranted in considering them as the same. The wings are unusually dark, and the dusky band occupies the whole of the apical third.

The bibliography is given in my note on the species of this genus, Proc. Acad. Nat. Sc. Phila. 1865, p. 96, and need not here be repeated. *Dorthesia flavicornis* Say, Journ. Acad. Nat. Sc. Phila. iii, 274; Ed. Lec. ii, 162, still remains undetermined.

M. americanus Guérin, Icon. Regne An. pl. 34, fig. 5, may be one of the darker colored species above described, but the description and figure are not sufficient to identify it with certainty.

NEMOGNATHA III.

The species are numerous, variable in color, and sometimes difficult to distinguish. Large series of specimens will probably shew the propriety of suppressing some of the species here tabulated, but the material examined does not warrant me in operating any farther reduction at present. Some purists write *Nematognatha*, but the amplification seems undesirable. The two groups might readily be separated as distinct genera.

* *Palpi moderately long, not very slender, hairy.*

A.—Outer spur of hind tibiæ very thick, large, obliquely truncate, inner one smaller and shorter; ♂ last ventral segment cleft, fifth impressed; ♀ front tarsi more slender and much more hairy than in the ♂.

Prothorax wider behind, rather densely punctured, abdomen shining sparsely punctured, color variable; ♂ fifth ventral feebly impressed; ♀ front tarsi with erect short hairs; 8—13 mm.; Ks.; Col.; Or.; Tex.; Ariz.

1. *lurida* Lec.

(*Type*).—Fulvous, tibiæ, tarsi, antennæ, palpi and tips of mandibles dark, or black.

a.—Antennæ, etc., legs and under surface black: ventral segments more or less fulvous; *decipiens* Lec.

β.—Black, head, prothorax and elytra fulvous.

γ.—Black, head and prothorax fulvous.

Prothorax not wider behind, less densely punctured; abdomen brown densely punctulate; color fulvous above, black beneath; scutellum and tips of elytra blackish; ♂ fifth ventral feebly impressed; 10 mm.; Cal.; one pair.

2. *apicalis* Lec.

B.—Outer spur of hind tibiæ broad, flattened and concave.

Prothorax not wider behind, rather sparsely punctured; abdomen shining sparsely punctured; color variable; ♂ fourth ventral finely punctulate behind at the middle, fifth widely and deeply impressed; ♀ front tarsi with long erect hairs; 8—13 mm.; Ks.; Tex.; Mont.; Col.; Cala.

3. **lutea** Lec.

(Type).—Fulvous, antennæ, palpi, tips of mandibles, tibiæ and tarsi dusky; beneath brown or black, ventral margins fulvous.

a.—Legs entirely black.

β.—Entirely pale yellow, antennæ and tarsi blackish; *pallens* Lec.

Prothorax wider behind, densely punctured; abdomen sparsely punctured; color variable; outer spur of hind tibiæ but slightly longer or wider than the inner one, both flattened and obtuse; ♂ fourth and fifth ventrals largely impressed; ♀ front tarsi with long erect hairs; 8—13 mm.; Ks.; Col.; Tex.*.....4. **bicolor** Lec.

(Type).—Black, head and prothorax fulvous; ♀.

a.—Beneath black, above fulvous; ♀.

β.—Above and abdomen fulvous, elytra with a dark stripe; ♂ ♀; *discolor* Lec.

γ.—Fulvous, antennæ, palpi, tip of mandibles, tibiæ and tarsi dark; ♂ ♀.

Prothorax scarcely wider behind, sparsely punctured; outer spur of hind tibiæ flattened, broader and obtuse, inner one acute; color fulvous above, black beneath, abdomen sparsely punctured, last ventral segments yellow; elytra with an apical black blotch; ♂ fourth and fifth ventral broadly impressed; ♀ front tarsi with short erect hairs; 7.2—10 mm.; Mont.; Or.; Cala.....5. **dichroa** Lec.

Similar in form and sculpture to *dichroa*; abdomen sparsely punctured; black, prothorax sometimes fulvous or brown; ♂ fourth and fifth ventrals broadly impressed and with median tufts of hair; ♀ front tarsi with long erect hairs; 8.5—9.5 mm.; Cala.; Oregon.....6. **dubia** Lec.

C.—Spurs of hind tibiæ equal, sometimes slender, sometimes obtuse, sometimes slightly flattened.

Elytra finely and very densely punctured.....2.

Elytra less finely and less densely punctured.....6.

2.—Prothorax not wider behind.....3.

Prothorax trapezoidal, wider behind, densely punctured; black, above brownish-yellow, elytra with a wide black stripe, spurs of hind tibiæ obtuse; ♂ as in *piezata*; ♀ front tarsi with erect long hairs; 11 mm.; L. Sup.; Mont. Perhaps only a variation of *piezata*.....7. **palliata** Lec.

3.—Prothorax quadrate, antennæ slender, maxillæ very long.....4.

Prothorax nearly oval, antennæ stouter, maxillæ shorter.....5.

4.—Prothorax densely punctured, abdomen sparsely punctured, spurs of hind tibiæ obtuse; color variable; ♂ fourth ventral broadly sulcate, fifth impressed; ♀ front tarsi with long erect hairs; 7—11 mm.; Atlantic region to Col. and Mont.....8. **piezata** Fabr.

(Type).—Black, upper surface brownish yellow, elytra with a black stripe.

a.—Black, upper surface yellow.

β.—Yellow, antennæ, etc., tibiæ and tarsi dark; *texana* Lec.

* This species is probably not different from *piezata* Fabr.; the prothorax seems somewhat variable in form.

Prothorax quadrate sparsely punctured, elytra more densely punctulate; spurs of hind tibiae more slender and acute; ♂ third, fourth and fifth ventrals more densely punctured, feebly impressed; ♀ abdomen sparsely punctured; front tarsi with long erect hairs; 7.5—11.5 mm.; Georgia.

9. **punctulata** Lec.

(Type).—Black, upper surface brownish-yellow, elytra with a black stripe. a.—Pale yellow, antennæ black, tarsi dusky; *flavipennis* Uhler.

- 5.—Prothorax transverse, almost ovate, sparsely punctured, fulvous; under surface dull testaceous, sparsely punctured; head fulvous, antennæ, tibiae, tarsi and elytra black; maxillæ two-thirds as long as the body; ♂ fourth and fifth ventrals broadly impressed and with median tufts of hair; sixth cleft to the base; ♀ front tarsi with erect hairs; 7—10 mm.; N. Mex.; Cala.....10. **nigripennis** Lec.
a.—Fulvous, antennæ, etc., knees, tibiae and tarsi black.

- Prothorax transversely oval, yellow, usually with two dark spots, abdomen sparsely punctured, sometimes testaceous, strongly not densely punctured, neck yellow, rest of the body black; maxillæ about one-half the length of the body; ♂ ventrals (except the first), impressed, and with median tufts of hair, sixth emarginate to the base; ♀ front tarsi with short erect hairs; 6.5—7.5 mm.; Middle, Southern and Western States.....11. **nemorensis** Hentz.
6.—Prothorax transversely suboval, not densely punctured, fulvous, elytra strongly not densely punctured, fulvous, with a wide black stripe, sometimes wanting, sometimes reduced to an apical blotch; rest of the body black, ventral segments sometimes testaceous; maxillæ as in *nemorensis*; ♂ fourth and fifth ventrals impressed, and with median tufts of black hair; ♀ front tarsi with short erect hair; 6.5—8.5 mm.; Middle and Western States to New Mexico.....12. **cribraria** Lec.
Prothorax transversely suboval, strongly and densely but not coarsely punctured; elytra similarly punctured; fulvous above, black beneath, front of head, scutel and margins of elytra black; maxillæ as in *nemorensis*; ♂ ventrals (except the first), impressed, and with median tufts of hair, sixth triangularly emarginate; ♀ front tarsi with ordinary pubescence; 5—8.5 mm.; Cala.; Utah.....13. **scutellaris** Lec.

* * Palpi longer and more slender, not hairy but only pubescent; mandibles more slender; maxilla less than one-half the length of the body; spurs of hind tibiae broad, obtuse; ♀ front tarsi pubescent, without erect hairs; NEMOGNATHA gen.

Prothorax longer than wide, narrower in front, shining, not densely punctured.....2.

Prothorax wider than long, subquadrate, strongly and densely punctured...3.

- 2.—Elytra very sparsely and coarsely punctured, prothorax nearly smooth; color greenish-yellow, antennæ, knees, tarsi and tips of tibiae black; ♂ ventral segments not impressed, sixth triangular, acutely cleft; 8—10 mm.; Ks.; Col.; N. Mex.*.....14. **immaculata** Say.

Elytra densely strongly punctured, prothorax nearly smooth, very sparsely punctured; ♂ as in *immaculata*; 9.5—14 mm.; Arizona.

15. **punctipennis** n. sp.

* The head is obliquely and rapidly narrowed in front of the eyes, and the mandibles are much less curved than in the other species, thus making the mouth narrower and more acute.

(Type).—Fulvous, antennæ, palpi, tips of mandibles and elytra black; knees and tarsi dusky.

α.—Like type, but first and second joints of antennæ, and entire margin of elytra yellow.

β.—Yellow, antennæ, tips of mandibles, palpi and tarsi more or less black.

Prothorax strongly not densely punctured; elytra strongly rather densely punctured; black, head, prothorax, scutel and thighs reddish-yellow; last ventral segments usually testaceous; ♂ fourth ventral slightly, fifth more strongly foveate, sixth triangularly emarginate; 5.5—6.5 mm.; Col.; N. Mex. 16. *sparsa* Lec.

3.—Fulvous, prothorax and elytra not coarsely, but densely punctured, antennæ (except at base), palpi, tips of mandibles, tibiae and tarsi, black; ♂ fifth ventral with a short channel near the hind margin, sixth slightly but acutely emarginate; 8.8—11 mm.; Ill.; Mo.; Tex. 17. *vittigera* Lec.
α.—Elytra with a broad black stripe.

Fulvous, prothorax very coarsely, elytra strongly and densely punctured; sides of prothorax rounded in front; antennæ, etc., and tarsi blackish; ♂ fifth ventral slightly impressed near the hind margin, sixth triangularly emarginate; 5—9 mm.; Southern and Western States; Texas.*

18. *cribricollis* Lec.

α.—Smaller, under surface in great part brownish; *porosa* Lec.

β.—Elytra brown, with fulvous border.

γ.—Elytra dark brown; *fuscipennis* Lec.

DIODYRHYNCHUS Sch.

I refer to this genus a pale colored insect from the Sierra Nevada, larger and stouter than our species of *Rhinomacer*, having like them simple claws, distinct labrum, and curved mandibles, not toothed on the outer margin. It differs however by the shorter palpi, and distinct epipleuræ, thus showing an affinity towards the Rhynchitidæ.

D. byturoides.—Oblong-oval, rather elongate, convex, testaceous, finely pubescent. Beak as long as the prothorax, cylindrical, curved, strongly punctured, with two grooves and a fine medial carina, behind the antennæ which are inserted about the middle; cavities behind the antennæ broad, lateral; head convex, densely punctured, eyes rounded, slightly convex. Prothorax wider than long, narrower in front, where it is slightly constricted, front margin sinuate, elevated; sides strongly rounded, disc densely punctured. Elytra punctured like the prothorax, distinctly margined at the sides, entirely covering the pygidium. Under surface punctured, abdomen piceous, last segment testaceous. Legs stout, rather long. Length 4—5 mm.

♂.—Prothorax widest in front of the base, sides more rounded.

♀.—Prothorax widest at the base, sides less rounded.

Sierra Nevada, Cal.; collected by Mr. H. K. Morrison. No notes of its habits have been furnished to me.

*The muzzle is long in this species, and the last joint of the maxillary palpi is slightly dilated and elongate-triangular, thus forming an excellent transition to *Gnathium*.

RHYNCHITES Herbst.

R. velatus.—Robust, densely clothed with prostrate coarse white pubescence; head behind the eyes brassy, elytra violet-coppery. Beak moderately stout, straight, as long as the head and prothorax, black, slightly flattened externally, strongly punctured, carinate at base, with a frontal puncture, eyes slightly convex; head slightly wider behind, punctured, hairy and black in front, transversely rugose, glabrous and brassy behind. Prothorax black, strongly punctured, narrowed in front, sides broadly rounded, base very oblique each side, obtusely rounded at the middle. Elytra violet-coppery, densely punctured, not striate, the striæ being represented only by rows of small distant black dots, from which proceed erect black stiff hairs. Pygidium exposed, punctured, hairy. Beneath brassy, finely punctured and densely pubescent. Legs black, densely pubescent, claws with a long acute tooth. Length 7 mm.

Sierra Nevada; collected by Mr. H. K. Morrison. The antennæ are black, inserted at the middle of the length of the beak, which is without lateral grooves or cavities behind the insertion of the antennæ.

ACALLES Sch.

A. Hubbardi.—Very robust, subpyriform, black, clothed with appressed scales; intermixed bristles so short as to be scarcely perceptible. Beak cylindrical, curved, without scales, shining, punctured, as long as the prothorax; head clothed with white scales, with a black deep median furrow. Prothorax a little wider than long, very much rounded on the sides, narrower at apex than base, and strongly constricted near the front margin; disc convex, cribrate, carinate at the middle, ornamented with several small dots each composed of a few white scales. Elytra ventricose, strongly and obliquely dilated behind the humeri, with an obtuse rounded angle; from this callus a short wide fascia extends inwards to the fourth stria where it unites with a small spot on the fourth interspace; there is a narrow undulated band of white scales at the second third of the length, and the declivity is mottled with small spots of white scales; at the base are some spots of velvety black scales; the striæ are deep, with large impressed foveæ, interspaces very convex. Legs in great part clothed with white scales. Mesosternum deeply semicircularly excavated. Length 7 mm.

Crescent City, Florida; found by Mr. Hubbard under *Opuntia* leaves. This species is quite distinct from any other known to me by the above characters, and is to be placed before *A. nobilis* in my synoptic table, (Rhynch. 240), with the following character: Scales appressed, without intermixed bristles. It is the species to which I have alluded in the remarks under *A. nobilis*, (p. 241).

EISONYX n. g. (Curculionidæ).

This genus belongs to the tribe Barini, and is related to *Microcholus* Lec., (Rhynch. 303), which it resembles in appearance. By the single claw it bears the same relation to that form as *Barilepton* does to *Centrinus*. The pygidium is visible in both specimens, but is, I think, abnormally protruded.

Body rhomboidal-oval, broadest at the anterior third of the elytra, gradually and obliquely narrowed before and more regularly so behind, obtusely rounded at each end, very convex above. Beak cylindrical, stout, curved, somewhat shorter than the prothorax, separated from the head by a transverse impression; eyes flat, partially covered by the prothorax. Head convex; antennæ stout, club large, oval, pointed, annulated, entirely pubescent. Prothorax subcylindrical, rather longer than wide, sides rounded near the apex, front margin not lobed, deeply transversely impressed on the sides with a row of six or seven large foveæ marking the impression. Scutel extremely small, punctiform. Elytra connate, rounded at tip; pygidium exposed by protrusion only. Prosternum deeply impressed transversely in front, rather narrow between the front coxæ, which are somewhat prominent. Mesosternum not impressed; side pieces large. Metasternum as long as the first ventral segment, side pieces very narrow, not very distinct. Ventral segments, first and second closely connate, as long as the other three united. Legs stout; tibiæ thick, especially the middle and hind pair, which are nearly conical and coarsely pubescent; all are truncate at tip, with a fixed spur at the inner side; tarsi short, joints 1—2 as broad as long, densely pubescent beneath, third larger, bilobed, fourth slender, not clavate, as long as first and second united, with only a single rather long claw.

E. crassipes.—Rhomboidal-oval, elongate, black, without lustre, smooth, with a few scattered punctures as indicated, and sparse whitish scales; beak punctured; prothorax with a few scattered small punctures and a row of large foveæ in the anterior lateral constriction. Elytra with striæ indicated only by rows of very distant large punctures. Beneath nearly smooth, pro- and metasternum punctured and pubescent with coarse erect brown hairs; thighs sparsely, tibiæ more densely, coarsely punctured and pubescent. Length 5 mm.

Two specimens have been received by Dr. Horn from Texas, one of which he has generously placed in my collection.

There are now four genera of Curculionidæ in our fauna remarkable for having but a single claw, which do not otherwise resemble each other in appearance or affinities, viz.: *Brachybamus*, *Mononychus*, *Eisonyx* and *Barilepton*.

MICROCHOLUS Lec.

M. erasus.—Oval, very convex, narrowed at each end, robust black, somewhat shining, though not polished, smooth, beak slender, cylindrical, curved, longer than prothorax, sparsely punctured; head smooth, convex; prothorax at base wider than long, gradually narrowed in front, constricted near the tip; surface very sparsely and finely punctulate; elytra widest at the anterior third, striæ very fine, evanescent behind, deeper and excavated at base, where there are a few white coarse hairs. Beneath sparsely punctulate, with a few brown hairs, thighs sparsely punctured, tibiæ more densely punctured. Length 4 mm.

Topeka, Kansas; Prof. E. A. Popenoe, one specimen. The middle and hind tibiæ are rather stouter at tip than in the other three species, from which it is abundantly distinct by the prothorax narrower than the widest part of the elytra.

BARILEPTON Lec.

B. Intescens.—Elongate, but less so than the other species, and having more the appearance of a *Centrinus*. Black, densely clothed above with dirty yellow small oval scales, which are denuded at the middle of the prothorax. Beak naked, cylindrical, curved, not as long as the prothorax, shining, sparsely punctured near the base; head globose, sparsely punctulate, separated from the beak by a transverse impression. Prothorax as wide as long, sides nearly parallel from the base for two-thirds the length, then obliquely rounded to the apex, not at all constricted on the sides; disc coarsely punctured. Elytra with deeply impressed striæ, and flat rugosely punctured interspaces. Beneath thinly pubescent, coarsely punctured; ventral segments shining, finely and sparsely punctured at the middle; metathoracic side pieces densely clothed with white scales. Tarsi very broad, piceous. Length 3.5 mm.

Columbus, Texas; E. A. Schwarz, one specimen.

B. albescens.—Elongate, of the same form as *lineare*, but much smaller. Black, clothed with yellowish white scales, round upon the prothorax, elongate-oval upon the elytra; denuded surfaces shining. Head and beak as above described in *lutescens*. Prothorax a little longer than wide, sides parallel for two-thirds the length, then obliquely narrowed to the tip; very slightly constricted at the sides near the tip; disc denuded at the middle, shining, sparsely punctured, with a smooth dorsal line. Elytra not wider than the base of the prothorax, striæ fine, well impressed, interspaces flat, smooth; the posterior callus and two submarginal spots are denuded, but this is probably not a constant character. Beneath sparsely pubescent and strongly punctured, ventral segments only sparsely and finely punctured at the middle, more densely pubescent at the sides. Length 2.5 mm.

Columbus, Texas; E. A. Schwarz, one specimen.

HIMATIUM Woll.

H. conicum.—Dull brown, without lustre, thinly pubescent with coarse erect yellowish hairs; elongate subconical, narrowed in front from behind the middle of the elytra. Beak entirely straight, cylindrical, punctured, hairy, as long as the prothorax, not separated from the head by a transverse impression, as in *H. errans*; eyes small, partially covered by postocular lobes. Prothorax longer than wide, gradually narrowed in front, sides nearly straight, except that they are suddenly incurved at the base; postocular lobes small, but distinct; surface punctured, without dorsal line; very slightly tubulate in front. Elytra truncate at base, slightly but gradually wider to behind the middle, then rounded to the tip; humeral angles distinct; striæ deep, almost sulcate, punctured, interspaces narrow, each with a row of yellow hairs. Beneath strongly punctured, front and middle coxæ widely separated; tibiæ short, scarcely longer than the tarsi, stout, with a large curved spine at the outer terminal angle. Length 1.6 mm.

Penington Gap, Va.; one specimen, H. S. Hubbard. This species is congeneric with *H. errans* Lec. (Rhynch. 427), but conspicuously distinct by the specific characters above given. *H. errans* has been collected at Tallahassee, Fla., by Mr. Schwarz, and also occurs in Pennsylvania.

I may here add that *Allomimus dubius* was found by Mr. Schwarz, in Texas, under the bark of the mustang grape vine.